

SHOW DAILY

BAFANG







The European Bike Fundamentals

We reached carbon neutrality

This photo was taken on the land we acquired in 2023, adjacent to Miranda, with over 24,000 sqm. Our goal is to promote a biodiversity and ecosystem restoration project to enable a regenerative management toward nature and carbon sequestration enhancement.

Our scope 1 and scope 2 CO2 emissions, measured in 2022, amounted to 334.2 tons. We have reached carbon neutrality for these emissions by purchasing Verified Carbon Credits, certified by VCS, ASES, and TÜV NORD. However, we are actively working towards achieving carbon neutrality through our own efforts. The acquisition of this land aligns with our goal to offset the residual emissions that are currently impossible to eliminate due to technological barriers.

We are proud to lead in sustainability with bicycle components made in Portugal, using 100% green electricity, incorporating an average of over 80% recycled aluminum content, and developed with ecodesign principles since inception. Additionally, having all production processes in-house, from design to final product, allows us to control sustainability at every step. Our supply chain is also approximately 75% local, further supporting our commitment.

VP's Evercore System Makes Replacing Pedals Easier











vpcomponents.com

VP's Evercore system allows pedal spindles to be reused—simply slide the inboard spacer off and remove the spindle from the used pedal. Then relocate these elements into the new pedal body and attach to the crank. Consumers save money and reduce their carbon footprint by only replacing what they need to.







Rear hub: Ratchet Drive X Straight pull

Ratchet Drive Systems are generally stronger, more reliable and need less maintenance compared to traditional pawl systems. The biggest advantage is that the ratchet faces engage simultaneously every time which increases hub durability.



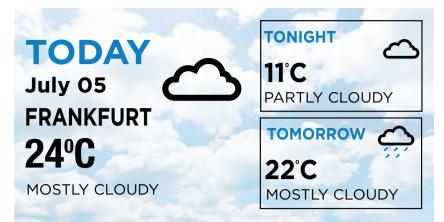




The ride starts here.

Booth No. D33 | Hall 12.1 EUROBIKE 2024







Marco Berger of Gravel Bike Germany surprised employees of Ritchey [Hall 12.0 - B02] with his tattoo in tribute to a watercolor rendition of Ritchey's Ascent gravel bike by illustrator Chris McNally.

Jeff Lockwood of Stan's [Hall 12.1 - A29], who repurposed the artwork for the t-shirt from the Ritchey 'zine in 2023 while he was Ritchey's international

marketing manager, was happy to see that the art resonated so much with fans. "It's an example of how much the Ritchey brand means to people," Lock-

wood said, "and its longevity both in art and in life."







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GRSNBLÅ

GRØNBLÅ OFFERS CLOSED-LOOP SOLUTIONS TO REPLACE PLASTICS WITH PLANT-BASED, BIODEGRADABLE PRODUCTS BY USING INNOVATIVE PROCESSES IN THE SUPPLY CHAIN FOR MANUFACTURING, COLLECTION AND COMPOSTING.

ZF ADDS SERVICE TO ITS BIKE ECO SYSTEM

One of the more important e-drive news items at Eurobike is the Bike Eco System from **ZF [hall 12.1/** A09]. Show Daily checked in with Marketing Manager Felix Schmidt at the company's booth to find out more about the services that come with this system. One decisive factor for success of e-drive suppliers is to offer fast and reliable service, and ZF is well aware of this. "Our dealer service portal is the central source of information for b2b customers. Here they can find all documentations and technical training, and they can get a service ticket. If a problem is reported before noon, we send out a replacement the same day which should be delivered the next day." Schmidt explains. ZF plans to offer technical clinics both at its service center in Karlstein and as a training course in various large cities.

ZF's Bike Service Tool comes with some handy features for bicycle dealers and manufacturers. This tool shows a detailed service history that facilitates tracking worn parts and repairs which also comes in handy if an e-bike is to be sold on the second-hand market. Bicycle manufacturers can use the configuration tool depending on whether the respective model comes with a display and remote control or just the core control unit. "For the initial set-up and calibration at assembly factories



Marketing Manager Felix Schmidt at Eurobike with ZF's new CentriX middrive motor

we have an end-of-the-line tool ready as well. Over-the-air updates should be possible by the time the CentriX motors actually hit the market," according to Pauline Parent, ZF's Project Manager Digital. LVR

SPACE CAMPER TURNS CARGO BIKE INTO LIVING ROOM



If you fancy a nomadic lifestyle but aren't into van life, there's the **Space Camper Bike [F11 / C15]**. It's a special kit for the Load4 75 cargo bike with full suspension by Riese & Müller, to quickly convert the vehicle into a desk, a lounge chair or even a bed, using a camping mat.

bag attached to the bike. "It could be for digital nomads who want to do some creative work in the park, or to take a power nap in the forest," said Ben Wawra, helpfully demonstrating the horizontal position. Wawra and his friend, Markus Riese, developed the Space Camper van concept nearly two decades ago.

ANTI-ANGLE GRINDER LOCKS ARE A CUT ABOVE



Granit Super Extreme 2500 by Abus with wolfram carbide reinforcement

While bicycle locks have generally been effective at resisting croppers and twisting-style attacks, they've historically been less effective at fending off thieves with angle grinders. At this year's show, several big names are introducing or expanding ranges specifically designed to address this threat. **Abus [hall 12.1/A37]** is sending up flurries of sparks from its demonstration booth as it shows off the new Granit Super Extreme 2500.

"This is the safest lock on the market," says Abus' Project Manager, Kathrin Erler. "What you can see on the outside of the shackle without its covering is a Wolfram carbide reinforcement that's welded on." This is intended to consume and destroy angle grinder blades before they can cut into the shackle. However, Abus remains tight-lipped about the exact method by which this works. "We put a lot of R&D into this. It now takes over 15 minutes to get through each side, with the design of the lock meaning you'll need to cut it twice. We think of security in terms of both resistance and time."

Just opposite on the show floor, **Hiplok's [hall 12.1/C38]** range of locks and wall anchors also features anti-grinder technology. "Ferosafe is a graphene composite material added to the locks," International Sales Manager Stuart Bailey explains. "The one you can see on our display has been subject to 20 minutes of cutting in which we've burned through five discs and had to change the battery."

Many of these new locks have gained 'powered-cycle' ratings previously reserved for motorbikes,

but should testing procedures change to reflect their abilities? "I think this new generation of locks needs its own ratings," says Bailey. Currently, they only need to resist cutting for a few minutes to get the highest level."

Erler also thinks standards might have to change to help consumers keep up with developments. "I'm not sure performance is always reflected in the current standards, but there's definitely demand in the market for these kinds of products. Resisting angle grinders is now a prerequisite, especially in big cities." JD



This Hiplok lock on display at Eurobike has been subject to 20 minutes of cutting







THE ONLY FOLDING LOCK IN THE WORLD WITH ARTS And we have two of them

seatylock.com



Hall: 11.1 Booth: D11 Come visit us! SECURITY SCALE



YJOTA.

Exhibition Area

Ecomobility: LEVs, Light Electric Mobility, Urban Mobility, Infrastructure, Logistics, Mobility Solutions, Ecomobility Forum

Hall 8.0

Bikes/E-Bikes	Hall 9.0, 11.0, 12.0
Parts/Equipment, Components, Fashion, Accessoires	Hall 9.1, 11.1, 12.1
Supplier Area (Wed Fri.)	Hall 9.2

Special Areas

Award Exhibition, START-UP AREA, CARGO AREA, SERVICE AREA, ECOMOBILTY Experience Gallery	Hall 8.0
SPORTS & PERFORMANCE AREA, Cycle Cafe, Pink Sofa	Hall 11.1
CAREER CENTER + Jobmarket	Hall 12.0
Handmade Area	Hall 12.1

EUROBIKE Hub: Networking Space, Media & Creator Lounge, Mediapartner, Trade press stand

Conferences & Sessions

Industry & Start Up Day, Award Verleihung,
Mobility Convention, Ecomobility Talk, Cargo
Academy, Bike Travel Forum, Retail: Sales &
Services, Mobility goes Digital Commerce

	eaders' Night, Women in Cycling, nvestors' Lounge, Bidex Lounge	Portalhaus
(Gravel Talk, VIP Meet & Greet	Hall 11.1/ Pink Sofa
	Handmade Talks, Innovation Pitches,	Stage 12.1

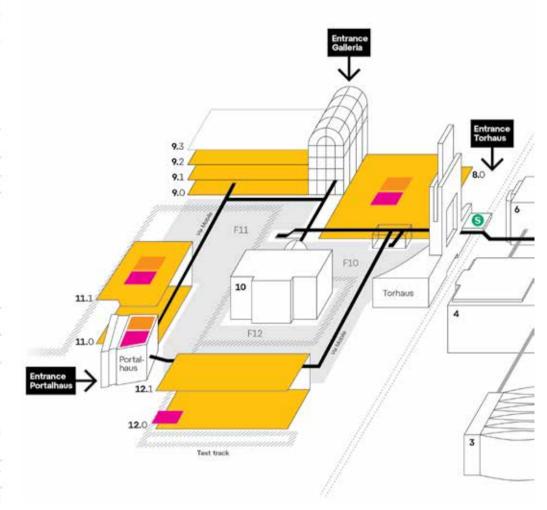
Open Air Grounds

15	
DEMO AREA, Sa Su.: Action Area, EUROBIKE	F10
Skyline Contest, Infinity Show, Bembel Crit,	
Cargo Bike Arbice	

DEMO AREA, Sa. – Su.: KIDS AREA, BIKE TRAVEL F11
AREA, GRAVEL LOUNGE

DEMO AREA F12

EUROBIKE VENUE MAP& PROGRAM OVERVIEW



PROGRAM OVERVIEW

EUROBIKE 03.-07.07.2024

Eurobike.com





DAHON's new "D-VELO" speed technology improves the rigidity of all bicycle frames, front forks and other components. So whether large or small-wheeled bicycle, it reaches unprecedented speeds.







thrill of D-VELO at Eurobike 2024

July 3rd - 7th Messe Frankfurt, Germany

PHall 9, Stand F06

MIRANDA SPOTLIGHTS SUSTAINABILITY



Green tones and sustainability ambitions are prevalent at this year's Eurobike, but Portuguese component specialist Miranda stands out with a particularly strong commitment to climate and environmental protection. Although the traditional company colour is red, the Miranda **[hall 8.0/102]** booth is prominently framed with green nature photos, underscoring its dedication to climate protection. During an interview on the second day of the show, João Filipe Miranda, CMO and CSO of Miranda, explained the motivation behind this move: "It's important that visitors learn about our ambitions. More and more companies are trying to find local suppliers with good practices. By showcasing our sustainable efforts, we not only enhance our own reputation but also inspire others to improve and follow suit.'

Miranda's efforts in sustainability are not new. The company has long

been an advocate for environmentally friendly practices, implementing recycled aluminium in their parts before it became a mainstream topic. Also, their sustainability report, publicly available on their website, is renowned for its thoroughness. Recently, they also acquired a 2.41-hectare plot of land adjacent to their facilities in Águeda, in the heart of the Portuguese bicycle industry, with the goal of preserving biodiversity.

Our visit to the company's booth made it clear: when it comes to sustainability, Miranda is not resting on its laurels. João Filipe Miranda also announced that a new sustainability report will soon be available. "We are currently working on a new version, set to be released in the next few months. This report promises to be more detailed than ever, providing in-depth insights into Miranda's ongoing and future sustainability initiatives."

OLYMPICS DRIVE INTEREST IN XC RACING

Pauline Ferrand-Prévot Pinarrelo is on the **Continental** stand **[hall 12.1/C16]**. Tiago Jorge Oliveira Ferreira's BH is on display at **SRAM [hall 12.0/A16]**. While bikes belonging to Nino Schurter make appearances at the **Scott [12.0/A20]** and **Maxxis [hall 12.1/C19]** booths.

The Olympics provide a high-profile opportunity for XC riders and boost the discipline, which is sometimes overshadowed by more consumer-focused genres like enduro.

"All bike and component makers want to win a medal at the Olympics, and it comes only once every four years, so you carry any title for a long time," explains SR Suntour's European Service Manager, Benjamin Rees. "We make a special effort for the Olympics. Last time, Tom Pidcock was the first to use our Tact system".



Olympic Champion Tom Pidcock will try to prolong his title on Pinarello's Dogma XC FS.



Nino Schurter's Scott Spark RC features the electronic Flight Attendant suspension of Rock Shox.

The system uses an accelerometer to offer automatic electronic control of the fork and rear shock. It took several years to reach the retail market after being first spotted at the 2020 games in Tokyo. It's one example of how the games are driving technology. "This year, we've added a custom battery, which Pinarello has allowed us to hide inside the frame, plus Tom is using pre-release 2025 lowers already."

Much of the technology deployed for pro athletes will eventually benefit consumers, so the pro's bikes are always a good place to get an early preview of upcoming technology. "The cross-country leisure market is much bigger than the racing segment, but technology always moves top to bottom," says Rees. JD

CHINESE MEGA-CORP AIMS AT E-DRIVE MARKET

There's no shortage of e-drive offerings at this year's Eurobike, with Hall 8 in particular serving as an incubator. What matters for new offerings entering the market is financial backing, and in this regard Preeto [hall 8.0/ **G03]** is in an enviable position. Parent company Zhaowei Gearbox is a Shenzhen-based specialist in combined e-motors and gearboxes with extensive business in the automotive, medical and consumer electronics sectors. For good measure this publicly traded corporation supplies over 100 million ABS steering units annually to the automotive industry.

Zhaowei also supplies many wellknown and established e-drive makers with precision parts. This already hints at one of this supplier's strong points. Jack Brandsen, business developer at Zhaowei's e-drives business unit, explains: "Most other e-drive makers mainly assemble parts supplied by others. Zhaowei does things differently and relies on its incredible depth of production. This vertical integration allows for end-to-end quality control. Apart from some electronics and the batteries, we can produce all the components for Preeto's e-drive systems in-house at Zhaowei."

The company's presence at Eurobike is the public debut for the Preeto brand. While the company has three mid-motors on display, with one sample churning away submerged in a water tank, it's still early days. "We



Jack Brandsen is tasked with developing the Preeto e-drive business unit for Zhaowei Gearbox.

are mainly here to listen and learn and define our USP accordingly, aiming to focus on ODM services and building drive systems and peripherals to specification. The next step for Preeto will be Taichung Bike Week," explains Brandsen.

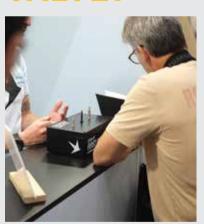
THE END OF THE PRESTA VALVE?

Schwalbe [hall 12.1/A22] is now offering a new take on the Presta valve, which just won a Eurobike Award at this year's show. "We wanted to completely solve the problems with existing valves," explained Schwalbe's Head of R&D, Marcus Hachmeyer at the company's stand yesterday. "We're aiming to establish it as the new standard."

The CLIK Valve uses a minimalist, non-threaded valve head that allows a click-to-fit attachment for an instantaneous seal and reduction in pump head wear. By eliminating the external part of the Presta valve, it removes the possibility of accidental damage while maintaining the lossless performance inherent to the system.

The design will be a standard option on the firm's tubes and is also retrofittable on most Presta, Schrader, and Dunlop-style tubes. Of course, the design is intended to work best with Schwalbe's pumps. We found Presta Cycle's President





The CLIK valve on display at the Schwalbe stand

David Finlay trying out the product for the first time with one of his own pump heads. "We have a lot of products that revolve around Presta technology, so we wanted to take a look. It's very important to ensure compatibility," he explained. Finlay appeared confident in this regard, although firms whose pumps rely on a screw-on fitting will be less lucky.

"It's a technology with some advantages, but it's not really a new standard. Still, I'm not sure where this sort of technology goes. Would Schwalbe ever be able to get competitors like Michelin or Continental to adopt it? I don't know".

EUKOBIKE S

INTEND WANTS TO TURN THE SUSPENSION MARKET UPSIDE DOWN

Freiburg-based Intend [12.0/

C24] is a small suspension maker in a segment traditionally dominated by big players. Its inverted design forks are now finding a wider audience thanks to improved lubrication, reduced bushing friction, and stand-out looks.

Intend grew out of its founder's desire to build and tinker with suspension products and has expanded to produce a complete range of front and rear suspension products. This is no mean feat, given the broad range of components that go into a single suspension product.

We now have suppliers from all over the world, with tubing manufacturers in Asia, milling done in Germany, and assembly completed by ourselves in Freiburg," explained founder Cornelius Kapfinger at Eurobike yesterday. "Initially, we needed suppliers who would make ten pieces. That's a hard thing to find. Now we're able to order runs of up to 1,000 items," he said. The firm remains small, with six staff, a turnover of just 500 forks a year, and a focus on the after-market segment. Nevertheless, collaborations with brands like Nicolai and Actofive have helped it gain an outsize following.



Intend founder Kapfinger believes its upside-down suspension offers better performance than bigger competitors

Intend's biggest USP is its upsidedown fork design. "The benefit is better lubrication as the oil is naturally moving downwards," says Kapfinger. "Friction under compression is also reduced as you move through the stroke because the distance to the bushings is reduced." Kapfinger believes this approach allows Intend to offer better performance than bigger competitors. The firm also offers an air spring system that it claims is more sensitive than rival products while allowing you to externally adjust the travel. All are benefits of a distinctly upside-down approach to suspension design and production. **JD**

JULBO LAUNCHES TWO-IN-ONE ROAD HELMET



Bart van Driel with the Julbo Finisher at Eurobike

Julbo [hall 11.1/D08] is launching its top of the range road cycling helmet at Eurobike this year. The 'Finisher' is being marketed as a two-in-one solution with a removable shell.

Specialised in eyewear for cycling and other sports, the French company entered the market for mountain biking helmets early last year. While that range has been amplified, the Finisher targets the road and gravel markets.

The Finisher's removeable shell is a major feature: "You can fit the extra shell for aerodynamics or protection from the weather," Bart van Driel, Julbo's sales and marketing manager for the Netherlands and Belgium, said at the show. "If you're a sprinter you can wear the extra layer for aerodynamics, and if you're riding uphill in

harsher environments, you can go without the shell," Van Driel explained.

If it's a rainy day, the removable shell will help to keep your head dry. But if the weather is warm, the ventilation will work better without the shell. The Finisher weighs in at 300 grams, and 395 grams with the shell. "It adds a little bit of weight, but on the other hand it increases the aerodynamics," Van Driel said.

Equipped with Mips Air Node technology, the Finisher was developed in partnership with the Groupama-FDJ cycling team. The Finisher Evo, the most upmarket of the two available versions, comes with the shell and a Fidlock system on the buckle. The helmets have an eyewear storage system at the front. ■BS

HUTCHINSON GETS INTO E-BIKE BELT DRIVES

Hutchinson has long been active in the bike business with its tires. But the French rubber company is now targeting the e-bike market with its belt drives, as a clean and lowmaintenance alternative to chains. Its Crossdyn belt drive is getting its full market launch in Frankfurt.

At the company's stand yesterday, Vincent Jouannard, who runs the belt drive systems business at **Hutchinson [hall 11.1/B06]**, said work started on belt drives for bicycles two years ago. "Belts are becoming more popular due to their cleanliness and easy maintenance," he said. "Another advantage is the silence — that's important for end users."

Hutchinson has come up with the Crossdyn belt drive, which has a patented belt design for e-bikes. It can be customized depending on the placement of the motor, the required gear ratios, length and other factors. It works with specific sprockets that match the design of the belt teeth.

The belt uses rubber as well as cords that are integrated during the production process, to ensure stiffness and tension. A thin layer of knitted fabric is added on the ribs.

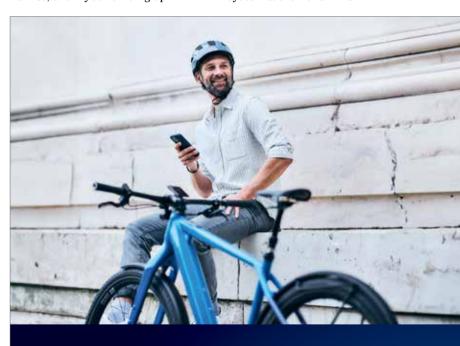
Jouannard said that Hutchinson is already working with several bike manufacturers. Serial production should be launched around the end of the year, or the start of next year near Tours, in central France.

Jouannard added that Hutchinson could use more sustainable materials



Vincent Jouannard shows off Hutchinson's Crossdyn belt drive

for its e-bike belt drives in the years ahead. It has already done so for some of its poly-V belts for other applications, integrating bio-based materials, recycled carbon blacks and regenerated rubbers.



Freedom on Two Wheels

Meet the new ZF Bike Eco System: Hall 12.1, Booth A09 + Outdoor Area F12, I12 **Visit ZF.com/ebike**



CLEVER LIGHTS, CLEVER DEMOS

Exhibiting lights in a brightly lit hall is not easy. Several brands have come up with interesting approaches. Prime among them is **Busch & Müller [hall 12.1/A26]**, whose display promoting its Briq-XL light enlists a robotic arm, widescreen TV, and array of wirelessly connected tablets to showcase the light's customisable features and unique auto-levelling technology.

"Our Horst robot is demonstrating how a normal light works and then how our Kurvenlicht works to keep the lighting level as you turn," explained Susana, who was working on the stand.

"On the iPads, you can see the app, which you can use to configure the light." Here, you can choose from



B&M is using its Horst robot to demo its self-levelling Briq-XL light

preset modes or use the MyMode function to create your own. The remote switch is also programmable, so you can also exert control from the handlebar. The unit offers both daytime running lights and high beams, with an output of up to 150 lux. It's offered for both OE and aftermarket.



Experience Sigma's lighting range in VR

Elsewhere in the same hall, **Sigma** [12.1/C32] was taking a similarly high-tech approach, this time using a virtual reality headset to transport potential customers to darkened forests and unlit roads to try out its latest Buster range. JD

P100 100 Nm | 2.8 kg | 87 % max. efficiency Open for full customization. Discover the GOBAO P100 motor: lightweight, powerful, and efficient with up to 100 Nm torque. Perfect for long rides and challenging terrains. Enjoy intuitive handling and quiet performance in a compact design. Meet us at our booth to experience the future of e-bike propulsion!

VOX POP

Impressions of Eurobike Day 1



Alexander
Aeschbach
Casco,
Switzerland
So far, there are a slightly fewer people than in previous years.
But that's normal, given what's going

on in the market — it's a strange year. We hope that everything will be normal again from 2025. I have seen friends that I know from before, I've been making contacts, but not seen anything special in particular. The wheel keeps on turning. In fact. I hope there will be nothing new, we don't need anything new right now. The market is so full of products. We would be better off pausing for one year, and selling what there is in the market. Because if new things come in, the whole market will crash. We'll have to lower the prices even further. and everybody will earn less on the old products. So, better stop for a season, and next year, maybe offer something new.



Paolo
Bailetti
Gruppo SRL,
Italy
I think that it's
less crowded
than last
year. That's
my feeling,
at least my
initial feeling.
I still have

to visit so many partners, but that's the first impression I got. It's a good chance to meet all the people in the cycling industry, so it's always good. It's always alive, the cycling industry. I'm not especially impressed – I mean, I saw what I was expecting to see. We're working in the cycling business, so we knew already what's coming from the cycling industry.



Caitlin Bower
Hunt Bike
Wheels, U.K.
It's interesting - I've been
here for the
last three
years now,
and I think this
is probably the most
comfortable

I've felt. The first time I came, I felt there weren't many women around. And now there's a lot more, which is nice to see. It's really important, I think. You see more people and it feels like you fit in a bit more, rather than standing out. I think the mood is a bit duller than usual. That's kind of reflective of how the industry is at the moment. But I think everybody is talking to each other, kind of picking it back up again, and we're starting to see new things pop up, which is always interesting.



Mostyn Thomas D3O, U.K. It feels like there's real momentum returning to the industry. You get a sense for an industry by the trade

show. The level of interest and engagement with customers, I'm certainly feeling that. We've been out of the show for a few years, we tactically withdrew. Straight back in now, launching new products. So we're excited to be back. A good first day, and we hope the momentum continues. I think the brands that are waiting for the market to return before investing in innovation and R&D, and what they're doing with their brands, are the ones that will be left behind. The brands that will be strong and that will succeed are those that invested in a downturn. We found the benefits of that, we've taken the opportunity in the last couple of years to really invest in our brand, the products that we're developing, how we're approaching the market, and we're excited to bring it (to Eurobike) now. We'll reap the benefits from it. The brands that do that, will be the brands that get ahead.



Riley Holmes

Bicycle
Technologies
International,
USA
I'm excited to
be here. Still
continuing to
get through
the overstock
situation I
think a lot of

people were in, but it seems to be mostly positive. Certainly, it's been productive for me. I work for a distributor in the United States. Eurobike has generally been successful for us, so I guess it's about usual.



Moritz Güttler

Specialized, Switzerland It's my first time here, it's amazing how many people and products are in this place. I came here

yesterday, and I was really impressed. Looking around, looking at all this stuff. I'm working in the bike industry, but I wasn't aware how big it is. So far, I think everybody is super kind here, stoked. I like the vibe, it's interesting. There are people with a lot of interest and passion, and at the same time business, it's a nice correlation here. It's probably not like in other industries where I worked before, where the shows are just business, business, business. Here it's a synergy of both.











pedaling force. The sleek M820 eMotor (design concept friendly) will thrill any eMTB/eRoad rider, whatever the terrain or incline!

More information on bafang-e.com



2.3kg

Hall 8.0 [J16]

ASTRO TECH GEARS UP WITH AUTOMATED ALLOY FRAME PRODUCTION



The bicycle industry is still struggling with high inventory levels and underwhelming order levels. But demand is more than likely to rebound, and frame manufacturer **Astro Tech [hall 9.1/D22]** intends to increase its capacity through automation, developing a revolutionary production method for alloy frames.

With factories in both Taiwan and Vietnam, Astro Tech supplies many bicycle brands with frames made of aluminum and carbon. Under the leadership of its founder Samuel Hu, the company has been a key player in pushing major trends in the past two decades. Now Astro Tech is aiming to become a full-service provider for e-bikes through a joint venture with electronics and battery specialist Darfon. Currently the company is investing in offices in downtown Taichung and building a new factory in Vietnam. It expects its output to grow from 700,000 units to more than one million units in a not-too distant future, helping the industry on its way to a lean just-in-time production.

As qualified welders are hard to find, automation is key for this growth. Astro first took aim at carbon frame manufacturing. Rather than relying on the classic thermoset technology where hundreds of prepregs need to be placed precisely before being drenched with resin and baked in moulds to get their definitive shape, Astro Tech has instead opted for

a thermoforming process long proven in aircraft construction. By pressing sheets of thermoplastic composite material reinforced with long strands of carbon fibres into molds, frame parts are made in halves. As a final step two matching halves are seamlessly joined to form a robust unit that offers plenty of space for in-tube batteries.

The machines for this automated production were installed at Astro Tech's Changhua headquarters in the spring of 2024. Since aluminum frames still have a far bigger market share, Samuel Hu and his team of 60 in-house engineers have been looking at ways to speed up this production as well, putting an emphasis on automation in order to reduce the need for human labor and to potentially set up this kind of production in Europe. Borrowing from the automotive industry and its foray into thermoplast frames, Astro Tech has opted for a thermoforming process. Frame halves are pressed from alloy sheets and then joined by robots using friction welding. The result is a lightweight alloy frame with no visible welds.

As a cunning extra, Astro Tech is laser-cutting the exact mounting interface for the mid-motor into the bottom bracket section of almost finished frames. This way no new tooling is needed if suppliers change their design or a bike manufacturer switches from one motor supplier to another. LVR

JULONG'S ZERAY PEDALS WITH 'MY-SYSTEM' AND CARBON INJECTION TECHNOLOGY

Ningbo Julong Machinery is revolutionizing pedal design with its new ZP-115 road bike pedal, featuring ultra-light, high-strength carbon fiber and a customizable MY-SYSTEM for high performance, efficiency, and personalized ride enhancements.



GM, Kungfu Zheng

Julong [Hall 9.1 / B08] specializes in pedal manufacturing for some of the biggest bike brands and produces around 35% of the annual world output of pedals. Innovative manufacturing techniques and materials such as ultra-light long carbon fiber have been central in the design of their recent high-end pedals sold under the firm's Zeray brand.

"To ensure that pedaling force

is transmitted to the crank without loss, the new ZP-115 road bike pedal incorporates ultra-light long carbon fiber into the main structure through the application of injection molding technology, making this model extremely light without compromising its strength," said General Manager, Kungfu Zheng. "These characteristics are further bolstered by the broad platform measuring 70mm at the widest point along with the three-bearing rotation mechanism—one needle roller and two ball bearings to provide higher support strength and extremely low rolling resistance, improving pedaling efficiency," he said.

A pair of square holes have been machined into the left of the rear half of the pedal body forming the MY-SYSTEM. This serves a DIY function where a range of accessories having different functions can be easily appended to the pedal body.

The body of the Zeray ZP-D269 plat-

form pedal is made of die-cast anodized aluminum, and is then CNC milled to produce a mirror-like surface with a metallic texture. Other key features include ultrasmooth bearing rotation allied with robust load-bearing qualities and a large tread area. Nine anti-slip pins are distributed along the edges.

along the edges,
which together
provide solid supinjection molding
technology
equals extremely
light yet super

along the edges,
which together
provide solid support and anchor
a cyclist's foot
firmly to the
platform.

Logo covers
the tread surface, giving
an enhanced branding
effect. It is anodized diecast aluminum that can be
electroplated in a variety
of colors, creating a striking
contrasting color with the
metal milling white. The



Julong HQ in Ningbo

Logo together with CNC milled grooves enhance the grip of shoes to the platform's surface.

Julong has two major manufacturing bases in Ningbo and Tianjin, China, and has started planning a third manufacturing base overseas. The company also has eight R&D, marketing, and service points located around the world.



Nine anti-slip studs provide comfort and anti-slip performance.

EUROBIKE

EUROBIKE IS SPRINGBOARD FOR SEMG EXPANSION SWISS E-BIKE HEAVYWEIGHT EYES GERMAN MARKET



SEMG CEO Frank Aeschbacher is heading the push into the German market.

With over 30 shops and multiple brands of its own the **Swiss E-Mobility Group [hall 12.0 / A07]** is a major player in the Swiss market. To kickstart its expansion into the German and Austrian markets, it has opted for Eurobike's global stage to relaunch its Cilo and Simpel brands.

With a strong brand portfolio and the M-Way chain of e-mobility stores, the Swiss E-Mobility Group (SEMG) is a big player in the Swiss market. Thanks to the financial backing of its owner. India's TVS Motor, it has been investing a lot of effort and manpower into developing its portfolio. Now it aims to expand into additional markets including Italy, Germany and Austria. This year's Eurobike show plays a key role, as SEMG has booked a large booth with over 260 m2 of floor space in hall 12 $\,$ to showcase its portfolio and roll out the new brand identities of its Cilo and Simpel brands.

"The Cilo and Simpel brands have seen a comprehensive relaunch, with significant changes to both their branding and the respective line-up. Going forward, Cilo will be fully focusing on sporty e-bikes in the upper segments of the market, appealing to enthusiasts and newcomers alike," says SEMG's CEO Frank Aeschbacher. "As for Simpel, reliability and low maintenance are the core elements in establishing the brand in the premium utility segment. The e-bikes

of this brand stand out with a clean design and customisation options. We will also show new models of the affiliated brand EGO Movement that mostly appeals to style-conscious urban consumers."

In Switzerland SEMG has been relying on its own chain of more than 30 M-Way stores, and a German store was opened in Nürnberg in February this year. But as Frank Aeschbacher points out this is not the strategy of choice for the expansion into Germany and Austria: "We are aiming to build a strong network of partners to grow and sustainably develop the German market, and for this a close and trusting relationship with independent bicycle dealers will be key. We are working on shop-in-shop concepts to be visible at the respective points of sale, but we do not plan to open more M-Way shops at the moment."

One important part of the expansion plans into Germany and Austria has been the expansion of SEMG's German offices Colag E-Mobility GmbH, formerly known as Eldisto. Experienced industry expert Maud von Hoff (formerly with Rotwild and Ca Go) has been recruited as brand manager for its e-bike portfolio. The new head of sales Michael Rilling has been tasked with customer acquisition, and a first successful step has been the recent signing of a cooperation agreement with Bike & Co.

SCADA UPS DROPPER POST OUTPUT

SCADA [Hall 9.1 / B16] commenced manufacturing pedals and rear shock manufacturing in 2012. Over the next few years they set up a lean production system and one-piece flow manufacturing followed by a complete Toyota Production System to which they added MES in 2018. Beginning with one manufacturing plant, they now have three facilities that make significant use of solar power generation having long incorporated ESG principles into their manufacturing processes.

SCADA has grown and prospered under the guidance of former CEO and now Chairman, Andrew Huang. A technologist by profession, after an initial stint at Giant, he spent several years in the USA under the auspices of A-Pro Tech. He returned to Taiwan to head their new brand, X-Fusion. After 13 years of building the brand he turned his attention to setting up and developing SCADA.

2024 finds the company under the direction of Vice President, Elvis Chen. As with the former CEO, the business model is the foundation of the business strategy. "When you think of SCADA, think of TSMC," said Chen. "SCADA emulates TSMC's business model by not competing with its customers. We have avoided the OBM route, and just focus on design and manufacturing," he said.

SCADA's target customers are exclusively in the OEM/ODM segment,



SCADA's Vice President, Elvis Chen.

brands looking for a supplier capable of designing and manufacturing middle to high-end pedals and dropper posts. While pedals and shocks have been their mainstay from the outset, they branched into dropper post manufacturing in 2019.

The company's latest model is the HAKA SUS, combining a suspension function with a rapid adjust function. "Not everyone needs a suspension or full suspension MTB," said Chen. "Some riders just want to cruise along the roads or use an e-bike for daily commuting. The HAKA SUS has been designed with them in mind," he said. "Dropper post sales are growing pretty well. Dropper posts last year constituted about 8% of sales, and are set to increase to around 17% this year," he said.



1.5mm and 3.5mm strips and H3/4/5/6/T15/T20/T25/T30 Bits. Also have repair patch and abrasive paper. Its compact essential & professional design ensures portability, making it ideal for rider on-the-go choice use.



weight, designed for

HBT-12BPK

The HBT-12BPK Handlebar Tool is a multi-functions, lightweight, designed for easy storage at both ends of the handlebar. The tool to meet different handlebar sizes by smart rotate CCW or CW of the cap to make the rubber ring expansion or contraction for suitable into handlebar. According to HBT-12BPK is made by Aluminum, if you need economical tool, HBT-12PK is your best choice as its tube is made by plastic.

U-POWER will be at Hall 9.2 and Booth No. C24a!
Wait for your coming!







ACER'S AI-DRIVEN E-BIKES PCS TO PEDALS: BLENDING TECHNOLOGY AND MOBILITY



Acer's new ebii is an Al-

for urban commuters.

IT companies like Acer [hall 9.0 / BO6], traditionally focused on computing and electronics, are increasingly entering the e-bike market. Their involvement brings a new level of innovation, integrating sophisticated software, connectivity features. and smart technologies into e-bike designs. This crossover not only enhances the functionality and appeal of e-bikes but also reflects a broader trend where technology and mobility intersect to create smarter, more driven smart bike designed efficient transportation

solutions. By leveraging their technological expertise, IT companies are well-positioned to drive the next wave of advancements in the e-bike industry, fostering a more connected and sustainable future.

> According to Acer **Chief Operating** Officer Jerry Kao, Over four decades ago, Acer laid its ICT leadership foundation through PCs, helping break the barrier between people and technology.

Today, Acer has built

upon its mission and offers a range of Aldriven e-bikes and a versatile e-mobility lineup, helping people around the world get around urban areas in a smart way".

Proof of that statement is the new Acer ebii Al-Driven e-bike that has already received multiple design awards, including the Good Design Award, Taiwan Excellence Award and Time Best Inventions Award while its companion ebiiGO app has received recognition with the Red Dot and Taipei Cycle Show d&I award and its ecofriendly packaging has been honored with the iF Award and Dieline Award.

Announced at Taipei Cycle Show 2023, the ebii's is packed with a plethora of smart features; an auto Bluetooth security system that locks your bike when you walk away and unlocks it when you're nearby, a fast-charging detachable battery that doubles as a portable charger for your devices, as well as sensors that detect oncoming vehicles to prevent collisions for extra safety.

Acer continues to innovate and expand its e-Mobility range with another e-bike and an e-scooter, both announced at Taipei Cycle Show earlier this year and both falling under the high-performance brand, Predator. First, the Predator eNomad-R ebike, just like the ebii, brings connected convenience, control and customiza-



Acer Inc. COO Jerry Kao

tion with Bluetooth LE and the smart Acer eMobility app. Built to endure, the Predator eNomad-R features a 750W rear hub motor, 20 x 4 inches fat tires and the 9-Speed SHIMANO CUES ensuring a smooth and thrilling ride. On the other hand, the Predator Extreme eScooter is Acer's nimble and responsive adventurer that offers a fun and confident ride on the streets or off the beaten path with its 350W (peak 960W) motor and 40Nm torque.

With its foray into the e-bike market, Acer exemplifies how IT companies can successfully diversify and innovate, merging technology with mobility to create smarter and more sustainable transportation solutions.

HALL 9.1, E39



Introducing our innovative patented clamp that offers incredible flexibility - it can rotate or stay fixed, providing you with options. The rotating ball ensures you can easily find the perfect view by exploring a full 360 degrees. Adjust the length as needed, making it suitable for various situations. (Model: HF-M6002LS-FR055)



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PROMISING SPRING DERAILED BY CHINA TARIFFS

US BIKE BUSINESS HIT BY GEOPOLITICAL HEADWINDS

The month of May 2024 started with some good news for the American e-bike segment. The respected electrek website reported on a new trend making electric bike batteries safer, referring to the "potting" of lithiumion batteries as a preventative for thermal run-away events and fires.



Potting, which uses a hardening resin poured between cells to isolate them from each other and the environment has been employed in consumer electronics for decades and it just took a little longer to get to the micromobility lithium-ion battery category. While all the relevant testing hasn't been completed, there is no reason to doubt that it will prove to be very beneficial in the prevention of thermal runaway events causing fires.

However, it will take time for enough potted lithium-ion batteries to enter the supply chain to realize the full positive effect. Human Powered Solutions (HPS) expects this to become a standard feature, and while it will be several years before there is universal employment of potting throughout the micromobility market in North America, this is a big step in the direction of safety and acceptance of lithium-ion batteries.

In mid-May Bicycle Retailer and Industry News reported: "House approves lithium-ion battery standards bill - The legislation now goes to the Senate." The House of Representatives approved the bipartisan Setting Consumer Standards for Lithium-Ion Batteries Act that would establish a federal safety standard for rechargeable lithium-ion batteries in mobility devices like e-bikes and e-scooters. H.R. 1797, which passed 378-34 would give the Consumer Product Safety Commission (CPSC) the authority to create that standard. HPS has been assured by the sponsor that CPSC is supportive of the bill. This means the Commission is in accord with fasttracking a mandatory federal standard for lithium-ion batteries for micromobility devices based on UL2271.

There is little doubt, given the support of Senator Schumer, senior Senator from New York and Senate majority leader that the Senate will act quickly to send this legislation to the President for signature, creating a law requiring CPSC to fast track the battery portion of the electrical propulsion system regulation of e-bikes by three to six months ahead of complete e-bike regulations and revised pedal only bicycle regulations which are now expected the end of 2025. HPS also believes this will also set the stage for a preemption battle between CPSC, and the American bicycle industry, with some states over conflicting state e-bike and lithium-ion battery regulation.

By the end of May the rising tide of geopolitics lapped up on American shores with the NBDA announcement that: "Section 301 punitive tariffs go into effect midnight, Friday, June 14!" As you may have read in Bicycle Retailer and Industry News (BRAIN) May 24, the U.S. Trade Representative (USTR) announced that the exclusions from the Section 301 punitive tariffs on children's bicycles, e-bikes, some carbon fiber frames and water packs, which were scheduled to expire May 31, had been extended in a transition period until June 14.

Section 301 punitive tariffs went back into full force and effect at midnight June 14 with a 25% additional import duty on 12-inch, 16-inch, 20-inch and 24-inch wheel children's bicycles originating in China – total of 36% on the FOB value and 25% on e-bikes originating in China.

Not only inflationary and totally unnecessary - but creating potential cash flow problems for importers of record who must pay 301 tariff duty, in cash, within 10 days of importation. 25% of an average \$1,200 FOB value (LEVA estimate) of a Chinese manufactured e-bike is \$300 and with approximately 200 units in a 40-foot container, the tariffs result in a \$60,000 additional cost per 40-foot container of e-bikes imported into the U.S. from China on

and after midnight June 14, 2024.

An estimated 80% or more of all ebikes imported into the U.S. originated in China in 2023. Adding up to a total estimated FOB value of \$1.2 billion, the new tariffs mean an additional \$297 million in import duty per year.

Some wholesale distributors and DTC retailers initiated immediate price increases to get as much additional profit out of their current inventory as possible before they start paying the additional punitive tariff of 25% on Chinese imports. Smart retailers who had both the cash and credit line took immediate action to purchase inventory that wholesale distributors have on-hand at the-lower prices before the 25% was added to inbound shipments.

The cash flow burden of having to pay U.S. customs an additional 25% on the FOB value of children's bikes and e-bikes originating in China after June 14 will result in a reduction in terms offered to retailers, and some wholesaler financial difficulty and possible bankruptcies.

The reaction of consumer demand to retail price increases on children's bikes and e-bikes is not yet known, but we anticipate that it will be negative. Children's bikes and e-bikes imported from countries other than China will have a price advantage in the American market going forward, but limited supply will cause shortages and out-of-stock problems from July forward.

What started as a promising 2024 spring for the American bicycle business is now caught in the geopolitical riptide of the Section 301 punitive tariffs, creating totally unnecessary and inflationary price increases that HPS foresees as resulting in a further reduction in consumer demand that could spill into next year.

■ Jay Townley

Partner and Resident Futurist, Human Powered Solutions



HUMAN POWERED SOLUTIONS

HPS exists to help in all aspects of execution of micromobility ventures. From product design to data and statistical research and analysis. Human Powered Solutions has the experience and knowledge to power your bicycle, e-bike, cargo bike, scooter or other micromobility business.

HPS Product Sourcing & Supply Chain - HPS possesses a unique skill set that includes pedal only, electric assist, electric component, connectivity and communication product and system design, manufacturing, and product management.

HPS Research & Analysis - HPS extensive industry and consumer research experience covers five decades of international history, data and insights on all channels of trade with a focus on specialty bicycle retail dealer organizations.

HPS Business Strategy - HPS is experienced in strategic planning and development, business planning, product safety and risk management, logistics planning and, negotiations, contract negotiations and supply chain management.

HPS Product Strategy - HPS is experienced in accident investigations, expert testimony and product and intellectual product defense, compliance evaluation and programs, owners-manual evaluation and development, customer service program development.

HPS Newsletter, Blog, Webinars, On-Site Training & Presentations - HPS monthly Micromobility Reporter & Blog, Monthly NBDA Radio Broadcast, Custom Client Webinars, On-Site Training for Clients and Speeches & Presentations.

HPS Prometheus Collective -

anchored by a resident Futurist whose job is to examine the media everyday for indicators of what the future for micromobility holds for current and future players and consisting of contacts and correspondents throughout a global network that trade information about the past, present and future that is shared in the HPS Newsletter & Blog.

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EU E-BIKE TARIFFS: BOON FOR EUROPEAN MANUFACTURERS, BURDEN FOR CONSUMERS?

The EU's decision to impose anti-dumping anti-subsidy tariffs against e-bike imports from China in 2019 provoked a profound shift in global supply chains. While the review of these measures is ongoing, the outcome is unknown. What are the pros and cons for a continuation of the measures?



Leva-EU's manager Annick Roetinck calls for a termination of the EU's anti-dumping tariffs.

The prospect of impending antidumping and anti-subsidy tariffs for e-bike imports from China into the EU was a major topic in the bicycle industry throughout the first half of 2018. After lengthy discussions with various stakeholders the European Commission decided to impose tariffs at a rate of up to 48.5 percent for a period of five years, starting in January 2019. Apart from China, tariffs were also slapped on e-bikes produced in Indonesia, Malaysia, Sri Lanka, Tunisia, Cambodia, Pakistan and the Philippines. The decision had a profound effect on China's competitiveness and on supply chains for e-bikes. To steer clear of the measures Vietnam and Taiwan became popular alternatives for the production of e-bikes. The trend to bring the production closer to the markets, known as reshoring, got a serious boost with countries like Portugal, Poland, Bulgaria and Lithuania attracting significant investment.

The effect of these anti-dumping tariffs quickly showed up in Eurostat's statistics: in the first half of 2019, imports of e-bikes from China dropped by over 80 percent, or more than 500,000 units year on year. While some of this loss was absorbed by countries such as Taiwan, Vietnam and Turkey, the domestic production of e-bikes within the EU also went up significantly. Some suppliers from China reacted to stricter requirements regarding the origins of parts and components used to build bikes by opening offices and sometimes even assembly lines within the EU – with

e-drive suppliers such as Bafang, Mivice, Okawa and Gobao as examples. Giant successfully appealed tariffs imposed on e-bikes made in its Chinese factories, showing that there was some flexibility within the EU's tariff rules.

As Eurostat's import data for 2023 shows, the effect of the anti-dumping and anti-subsidy tariffs is ongoing. With a share of 59 percent of imported e-bikes, Taiwan was by far the EU's most important supplier, with Vietnam accounting for another 16 percent and Switzerland for 11 percent. China only stood at 6 percent, so the effect of the measures on China's e-bike exports

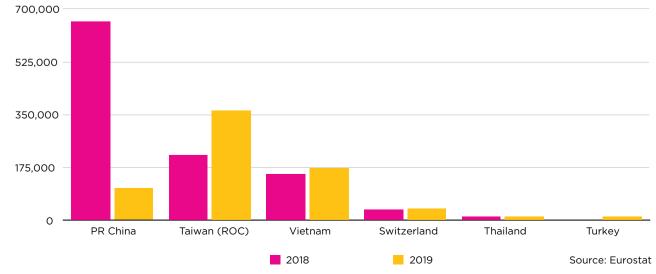
into the EU were both significant and lasting. A couple of high-profile cases where Chinese manufacturers aimed to avoid the EU's tariffs and VAT by fraudulent means point to the emergence of a grey market. In February, customs officials raided two warehouses in the Western Polish towns of Slubice and Swiecko, right at the border with Germany and confiscated no less than 20,000 e-bikes. The same goes for D2C webshops that aggressively advertise e-bikes for less than €1,000, sent from "warehouses in Poland" but clearly made in China.

Without anyone objecting the anti-dumping tariffs would have expired as per January 19, 2024. But unsurprisingly the European Bicycle Manufacturers Association (EBMA) called for a review and an extension of these measures by another five years. Although the EBMA declined to comment to the Show Daily, it referred us to its public submission to the European Commission. In this document the association points at the shifts in the supply chains seen since 2019 and investments in various European countries, creating jobs along the supply chains and thus fiscal revenue. The EBMA also argues that state subsidies distorting the competition are still widespread in China's export-oriented industries and that electric vehicles are at the core of this issue, including e-bikes. In short the anti-dumping tariffs had their intended effects from the EBMA's perspective and therefore should be continued.

Representing European importers of light electric vehicles, Leva-EU's manager Annick Roetinck contradicts EBMA's view strongly: "The EU's anti-dumping measures have had a devastating effect on European businesses, creating an inextricable tangle of regulations while putting administrative burdens on both companies in Europe and on the European Commission. These tariffs have reduced supply and pushed up prices for consumers, leading them to abandon e-bikes and return to the use of cars. Therefore we call for a termination of these anti-dumping measures on behalf of an Ad Hoc group of European companies. The extensive technical legislation implemented by the EU in recent years is sufficient to keep companies from dumping technically inferior products on the European market." There have indeed been examples of companies getting into financial trouble due to advance payments of tariffs, pending on a proof of origin of all parts used to build bikes. Dutch e-bike brand Qwic has been a prominent example, being forced into administration due to outstanding invoices.

It's no secret that the political climate between Beijing and Brussels has been deteriorating as of late and the discussions about subsidies and overcapacities within China's EV industry have amplified concerns. The existing tariffs have had obvious effects on supply chains since they were put in place in January 2019 – with some undesirable spill-over effects as well. Therefore a termination of the anti-dumping measures as decided by the United Kingdom after leaving the EU would be a surprising move on behalf of the European Commission. The deadline for stakeholders to comment on the final disclosure of the review report is set for the end of September 2024, with a decision to be taken by the European Commission by January 16th 2025 – so make sure to mark those dates in your agenda. LVR

Imports of e-bikes into the EU by countries of origin, in units



The year 2019 when the anti-dumping tariffs got into effect saw a drastic change in the origins of e-bike imports into the EU.





INVESTMENTS MOVE SOUTH FOR LOWER COSTS & BETTER TRADE DEALS

TAIWAN'S BIKE GIANTS FLOCK TO VIETNAM AS CHINA LOSES FAVOR

While foreign direct investments have plummeted to new lows in post-Covid China, many Taiwanese bicycle companies have been investing heavily in Vietnam. The Show Daily visited the country to check out some of those investments in person and ask managers why they decided to move there.



Workers at the saddle assembly line of the DDK Group in Vietnam.

One of the secrets of success of Taiwan's bicycle industry is the geographic and personal proximity of key players along the entire supply chain. As most relevant suppliers are based around the city of Taichung with a few outliers in Tainan, Taoyuan and New Taipei City, the resulting short distances and familiarity make both logistics and cooperation a whole lot easier. These gains in efficiency have made Taiwan a global leader in the upper market segments. A couple of decades ago, when many Taiwanese companies started investing in China due to labor shortages, high costs and to generally remain competitive for price-sensitive volume production, they followed the same logic and put their factories in clusters close to the cities of Kunshan and Shenzhen, respectively.

The combination of Taiwanese engineering know-how and Chinese manufacturing power seemed like a perfect match for the bicycle industry. But then geopolitics and the Covid-19 pandemic got in the way. China sought to protect its domestic market while flooding North America and Europe with cheap consumer goods, leading to serious issues for industries in markets and a massive trade surplus. This resulted in escalating trade conflicts that had a serious impact on the bicycle industry and \bar{t} he way it sets up its supply chains. 'Made in China' had become a liability in terms of tariffs and trade conditions even before the Covid-19 pandemic hit. Beijing's draconian zero-covid policies, the seemingly

arbitrary closing of borders, factories and harbors and a lack of transparency made production planning difficult.

Thus many companies reconsidered their investments in and commitment to China, and Vietnam was the obvious prime alternative. "As a rising industrial power this country boasts a higher birth rate and thus a younger population than China, resulting in a larger workforce and fewer issues in recruiting staff for industrial labor," as Fritz Jou of FJ Manufacturing explains. Another advantage: Vietnam does not require foreign investors to get domestic entrepreneurs on board in joint ventures. It's not all rosy though, as Vietnam's ongoing campaign against corruption has been scaring officials, adding red tape and complicating investments. Still, one sentiment shared by Taiwanese managers in Vietnam is that the dynamics in the country are very similar to those experienced in China during its golden era, being the decade from 2005 to 2015.

The Binh Duong province has become a major center of industrial production in southern Vietnam. While the northern area around the capital of Hanoi is more popular with investors from China due to the proximity, the Binh Duong province has attracted a lot of investment from Taiwan, Japan and the United States, putting it in the top three of Vietnam's most prosperous provinces. Situated just north of the busy metropolis of Ho Chi Minh City, the province boasts international industry parks and profits from the

proximity to a large commercial harbour and an international airport. This is what attracted a first batch of assembly specialists from Taiwan such as Asama Vietnam, Dragon and Strongman. Pioneering suppliers followed suit and started their operations in Vietnam as early as 2000.

Founded as a specialist in 3D tubing and frame production in 1991, Astro **Tech** set up shop in Binh Duong province in the year 2000. Company founder Samuel Hu bet on developing and building frames for e-bikes early on, and his company's workforce grew from 7 to 3500 - of which 3250 are employed in Vietnam. Currently, 90 percent of the company's frames are being produced in Vietnam. While Astro Tech's first Vietnam factory, with an annual capacity of 500,000 alloy frames, was built close to the booming metropolis of Ho Chi Minh City in Dong An, the second factory was moved further away from the city and up north to Kim Huy. This factory added another 250,000 alloy frames and an additional 50,000 carbon frames to Astro Tech's production capacity in Vietnam.

An in-house paint shop with a capacity of 400,000 frames per year was also installed for more efficiency and consistency. Right now, construction is ongoing for a new factory in the Phu Chanh region close to the second one that is set to replace the original Dong An plant. This new investment will also be where Astro Tech plans to install its first fully automated production line for aluminum frames – an ambitious project that the Show Daily covers in a separate feature and that could open the doors to bringing just-in-time production of alloy frames closer to key markets.

Another very early mover to Vietnam was the **DDK Group**, a specialist in saddles, grips and seat posts. When French sporting goods giant Decathlon, one of its key customers, opened up factories in Vietnam around the turn of the century, DDK Group followed suit. With six factory halls on a plot of land measuring over 70,000 m2, the factory currently employs a staff of 400 to 500 people and accounts for the biggest share of production, ranging from saddles and seatposts to hubs. It is not DDK Group's original factory in Vietnam however. That building became a victim of geostrategic turmoil. In May 2014 China sent a ship into waters claimed by Vietnam to probe for oil, kicking off an escalation that resulted in riots and attacks on factories with Chinese character signs in Binh Duong province – with the Vietnamese making little distinction between Chinese and Taiwanese companies.

The Formosa Taffeta Corporation (FTC) also invested in Vietnam's south early on, starting construction for its plant in Dong Nai province, East of Ho Chi Minh City in 2004. This facility stretches



Aluminum specialist A-Forge was still installing machinery in its new factory in Vietnam in March.



With Giant, Taiwan's biggest bicycle manufacturer has set up shop in Vietnam as well.



Astro has been an early mover into Vietnam, and its factories are impressively large.



The office building and some factory halls at DDK Group's factory in Vietnam.

over two plots of land on either side of a road in an industrial park, with one plot measuring 210,000 m2 and the other adding another 65,000 m2. As FTC supplies tire makers, shoe and sportswear manufacturers with synthetic garments, the bicycle business only accounts for about 20 percent of its turnover and proximity to bicycle-related production clusters was not a must.

"When demand spiked during the pandemic, we did not hire a lot of additional workers. Instead, the existing staff agreed to work longer hours and get more salary in return. Now that demand is flat and the work hours are back to normal, we even lost some workers who went to other companies to avoid a return to their normal salary," says factory manager Chang-shun Chi.

As a specialist in all kinds of alloy



The Formosa Taffeta Corporation has built a copy of its factory in Taiwan in Vietnam.



Factory manager Chang-shun Chi poses with a roll of finished synthetic garment.

parts, **Kalloy UNO** decided to invest in Vietnam in 2015, with actual production starting in 2019 in the Pro Trade Inter-

national Tech Park situated in the north of Binh Duong province. "The main driver for our investment in Vietnam were the trade conflicts between the United States and China, Vietnam on the other hand managed to negotiate free trade agreements with both the US and the European Union, making it very attractive," says special assistant Jason Chen. "Since Kalloy UNO is an OE player, we put our factories where large assemblers are producing. And Vietnam has seen a significant uptick in this regard." It was not all smooth sailing for investments in Vietnam as the EU imposed anti-dumping duties on bicycles made in the country from 2005 to 2011, putting the first development phase to an end. But times have clearly changed since then.

Another example of the second wave of Taiwanese investments in Vietnam is **SR Suntour**. The factory of this suspen-



The casting department in Kalloy UNO's Vietnam factory.

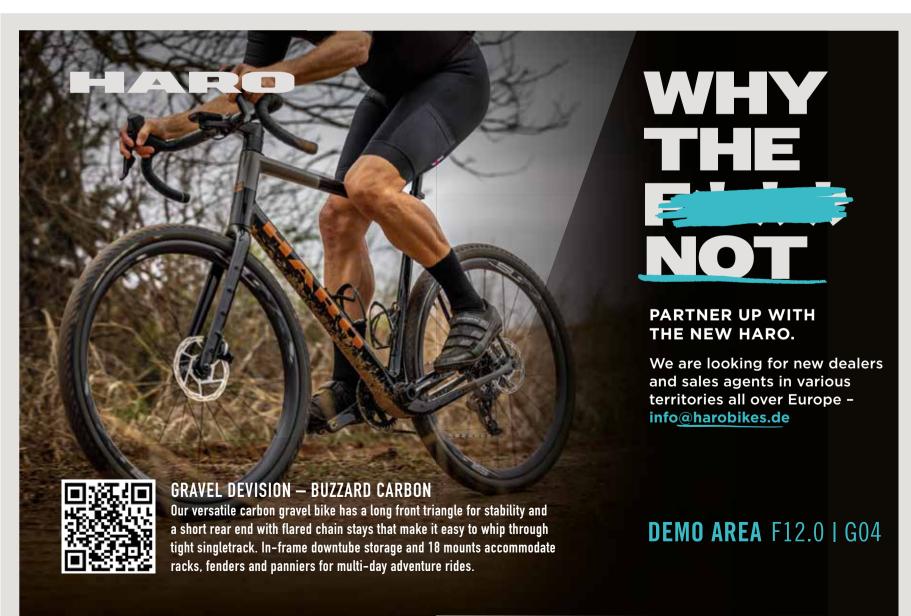
sion components and e-drive systems maker was built in the north of Binh Duong in the Pro Trade International Tech Park, starting production in 2017. "Apart from casting alloy lowers, this factory assembles suspension forks, shocks, suspension seat posts and electric hub motors, mostly for assemblers in Southeast Asia," vice general manager Roderick Wang explains. "Producing in various countries has allowed us to mitigate the consequences of the Covid pandemic, and it also seems wise as a plan B in case the geostrategic situation and tensions in the Indopacific should get out of control," he added. To further expand its production capacity in Vietnam, SR Suntour has rented an additional factory that will also allow the company to produce stanchion tubes in-house.

The most recent investments of Taiwan-based suppliers come from



Special assistant Jason Chen poses next to the sign of Kalloy UNO.

substantial players such as the **Giant Group** or **Velo Saddles**. Some of these factories were still







SR Suntour is doubling down on its investment in Vietnam - to the right Vice General Manager Roderick Wang.

under construction during our visit in March, having been delayed due to the Covid pandemic. The main reason for this latest investment wave was the soaring demand for bicycles

and e-bikes during the pandemic. As this demand collapsed, shifting the production from China to Vietnam was still an option in order to avoid tariffs for products made in China. "Since the pandemic delayed the construction of the factory, demand was already down when it was completed. But a lot of know-how from our factories in Taiwan and China has gone into this facility, so this will be our most efficient and modern production site," Velo CEO Ann Chen explains.

Just like Kalloy UNO and SR Suntour, Velo Saddles has set up its facility in the same industrial park that houses nine bicycle-related manufacturers in total. And according to Ann Chen, there is another advantage of production in Vietnam: "We have been employing migrant workers from Vietnam for many years in Taiwan, and we are bringing these experienced employees



Velo has built its factory in the Pro Trade Industrial Park popular with companies from the bicycle industry.

back to Vietnam now so they can train their compatriots." Since most factories set up in Vietnam are tailored for efficient volume production and land in industrial park is still readily available, these investments tend to be big both in value and size. As an example, the Vietnam factory of tubing and casting specialist **A-Forge** will have a footprint of 24,000 m2 and a staff of about 700 once all the machines have been installed. Full production is scheduled to start in September.

The additional capacity may come in handy once demand is back up – which most experts expect it will, sooner rather than later. And last but not least, keep in mind that Taiwan's current administration has been actively promoting a shift of investments away from China and towards



Saddle production at Velo's new factory in Vietnam.

various Southeast Asian states as part of its New Southbound Policy that aims to reduce risks and keep supply chains more resilient. ■ LvR

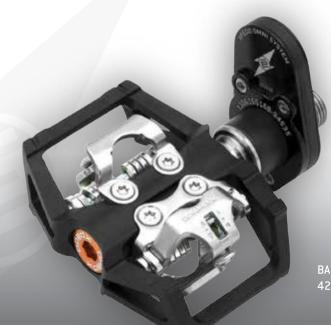


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TAIWANESE COMPANIES AT EUROBIKE

TAIWAN'S DIVERSE INDUSTRY ON DISPLAY IN FRANKFURT

Taiwan has long been known as the heart of the bicycle industry. With a comprehensive production capacity that includes every part of the bicycle - from high-quality frames to cutting-edge electric bike innovations - Taiwanese manufacturers are uniquely positioned to influence every aspect of the industry. At Eurobike, their presence is more than just a showcase of products: it's also a demonstration of their strategic ambitions and forward-thinking goals.



Complete e-bike with Astro's latest double battery solution.



Astro's GM, Samuel Hu, in Astro's Vietnam office.

Recognizing that the overall market condition is still influenced by macroeconomic factors such as inflation and the ongoing war, Astro [Hall 9.1 - Stand D22] "hopes to leverage the new products launched by all brands at Eurobike to stimulate market demand and better sales. The goal is to increase order volume and bring it back to normal levels by 2025," says Astro GM Samuel Hu. In addition to showcasing its latest products to current customers, Astro will also seek to attract potential new clients. "Given that many of Astro's clients are based in Europe and may not have the opportunity to visit Asia, Eurobike provides a valuable platform for face-to-face interactions, facilitating the exchange of market information and new project ideas," Hu adds. Astro is showcasing several innovations, including the thermoplastic carbon technology introduced last year - now with mass production capability, a lightweight alloy frame design featuring a new

process for shorter lead times, and an innovative battery design for complete bikes (see our battery overview elsewhere in this issue for details). Additionally, Astro will present a new longtail frame design, reflecting the growth in this category.

For Hafny [Hall 9.1 - Stand E39],

a company that specializes in bike mirrors, attending Eurobike is also essential to stay updated on market trends, maintain client relationships and gain insights for product development from markets with a more advanced biking culture. Asked about her expectations for the show, Corrine Li, Marketing Manager at Hafny emphasized the challenges of the past two years. "I hope to hear more

positive news that

will enable everyone



Hafny's latest rearview mirror features an extended arm design.

to recover and resume operations smoothly." As their bike mirrors are becoming very popular in Western Europe, they continue to "aim to raise awareness about safety and the need for sturdy and reliable rearview mirrors," she added. To that extent, Hafny remains focused on innovation, especially with the rise of e-bikes, and is showcasing the HF-M6002LS-FR055 rearview mirror with an extended arm design for a clear field of vision, a simple adjustable length mechanism, and a patented buckle ring for customizable angles.

Following Taipei Cycle earlier this year, Yota Cycles [Hall 9.1 - Stand E03] is also optimistic about the overall recovery of the industry, as it is observing a significant increase in inquiries and more opportunities for sample orders compared to last year. "This year, our goal is to strengthen our presence in the European market, establish new partnerships, and gain valuable insights into industry trends. Additionally, we hope that Eurobike

Yota's new e-MTB, with a low step

frame, is specially designed for women.



Corrine Li, Marketing Manager at Hafny.

will allow more international brands to recognize Yota Cycles as a qualified Taiwanese assembly manufacturer with bonded warehouse status," said Walter S.L. Chou, Yota Cycles' founder. Furthermore, Yota Cycles is capitalising on Eurobike to connect with industry leaders and showcase their latest innovations to

customers and partners:
a new E-Urban that
features dual motors
and dual batteries,
the E-Cargo - a
highly-capable and
highly adjustable
cargo bike -, an
E-MTB specially
designed for women
without compromising
on SUV-like functional-



The UniDrive 70 is Hyena's latest mid-drive unit.



CEO Neco Wang presenting Neco's latest mid-drive motor at Taipei Cycle.



Velo's office near Taichung, Taiwan.

ity and an E-Trekking featuring an Enviolo internal gear hub and belt drive system.

Shawn Lin, marketing manager at Hyena E-Bike Systems [Hall 8 - Stand H18], is conscious that the e-bike market is driven by increasing demand for sustainable urban mobility and continuous technological advancements and will undoubtedly continue to grow, surpassing pre-downturn levels. At the show, Hyena's team is "eager to engage in discussions about new e-bike models and technological innovations with existing or potential new business partners," explains Shawn. Acknowledging the importance of meeting market demands, he adds that Eurobike will be a great platform to "explore how companies are integrating sustainable practices". Hyena

is also launching its new UniDrive 70 mid-drive unit, designed for versatility, alongside the BS-B4540+ battery that offers 540Wh capacity and can be used with an optional range extender.

Looking ahead, Neco Wang, CEO at Neco [Hall 8 - Stand K26], anticipates this year's show to be "vibrant and full of opportunities for collaboration and learning" and notes that "the market is embracing more eco-friendly and high-tech solutions" and is committed to "driving this trend by investing in research and development, ensuring products not only meet but exceed customer's expectations." Catering to the growing demand for efficiency and performance, Neco is introducing its new MM68 mid-drive motor that delivers 250W power with 80Nm torque, weighs 2.2kg and is notably smaller in size.

With its long presence in the industry, and despite its extraordinary achievements, Velo [Hall 12.1 -**Stand C22]** continues to have strong ambitions to conquer new markets, the focus for its presence at the show being not only on existing customers but also on finding new opportunities. "It's an important event to understand what the market trends are so that we can design products that fit market's needs," explains CEO Ann Chen, adding that Velo's "customers are still eager to innovate and thus Velo needs to keep innovating and keep a closer collaboration with them to come up with the products they need." True to tradition, Velo will once again showcase a diverse array of innovative products - saddles, grips and bar





Armor celebrated its 50th anniversary earlier this year.

tapes - at Eurobike, unveiling the latest advancements in their lineup.

For over 50 years Armor [Hall 9.1 - Stand A35], has been offering a comprehensive range of services including tubing, frame manufacturing, parts sourcing and complete bike builds with accessories to meet the diverse needs of the riders. So it's no surprise that "Eurobike not only represents a great opportunity to meet and deepen relations with both customers and suppliers but also to stay up to date with the latest trends and innovations. In addition, it's a great place to exhibit our strength and abilities to support our partners,' says Donal Lin, Customer Relationship Manager at Armor. At the show, Armor

is showcasing its 'Lego-like' ebike solutions. Through modular tubing options tailored to various e-bike categories, with mid or rear motors, these offer remarkable flexibility and efficiency, minimizing production lead times and tooling molds.

Eurobike also holds immense significance for **Taya Chain [Hall 9,1 - Stand E43]**, as it unveils its latest bicycle chain innovations and fortifies connections within the cycling community. This year's focus centres on showcasing products, networking with industry professionals, and staying abreast of market trends. Taya anticipates expanding their chains' usage through collaborations with professional teams and riders,



Hua-Tien Wu, President of Taya Chain.

enhancing brand visibility, and fostering global partnerships. Notably, it recognizes the growing popularity of e-bikes and the demand for convenience in lifestyle choices, including the rise of public bike systems and e-commerce. Hua-Tien Wu, President of Taya Chain, emphasizes that "while most people see chains as just a part of the bicycle manufacturing system, Taya views chains as a key element in a service industry that prioritizes product integration and market trend strategies. Taya delivers products that meet contemporary needs through innovative technology, focusing on the value we offer to our customers rather than competing on price.'

Bicycle Cluster (bicyclecluster.com)



Bicycle Cluster CEO Alfred Tsai.

is visiting Eurobike to introduce its innovative sourcing tool to a broader audience of international brands, media, and buyers. The tool streamlines supplier discovery through keyword searches, enhancing sourcing efficiency. Its primary focus at the show is to promote the digital platform and share member companies' latest innovations. Observing key trends in cargo and e-cargo bikes, as well as a growing emphasis on gravel-related parts and ESG initiatives, Bicycle Cluster founder Alfred Tsai notes that "Taiwanese companies are adapting to maintain competitiveness and, considering both price and quality, Taiwanese companies always have an advantage." ■ MW





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OVERVIEW: SMART NAVIGATION TECH AT EUROBIKE

PRACTICAL NAVIGATION WINS OVER AI HYPE

There's not a lot of Al navigation technology at Eurobike - but there will be numerous innovative solutions that are more practical for reliable routing, navigation, communication and assistance systems. Here's a guide to the hidden champions of digitalization in the bicycle sector.





Sigma's new Rox 4.0 Endurance bike computer now lasts up to 41 hours



Bosch celebrates ten years of "Connected Biking" - and increasingly relies on the smartphone as a navigator

Although much hyped at the moment, Al requires complex hardware, extremely high energy consumption and a connection to the internet with high data throughput. For mobile devices, this will only be possible with the most powerful smartphones of the next generation, as Apple recently announced. But these are precisely the killer criteria for the outdoor sector. And anyone who wants to plan, navigate and arrive reliably can find numerous innovative solutions here in Frankfurt.

Bosch [12.0/A21] is constantly expanding its "Smart System" with ongoing updates and new functions in the areas of theft protection, navigation, and personalization. With the new "Range Control" feature, the desired minimum battery level at the destination can be set. During the ride, the smart system then adjusts the motor assistance if necessary. User data-compliant access to the Bosch eBike Cloud allows manufacturers to offer special versions of the eBike Flow app for the user.

One of the most innovative GPS bike computers - the Hammerhead Karoo, can be found at **SRAM [12.0/A16]**. Hammerhead was taken over by SRAM two years ago and now serves as the central control unit for the new Red AXS groupset. Now in its third generation, the Karoo also competes as a separate bike navigator with an excellent 3.2-inch AMOLED-based display and practical offline routing and navigation features with the previously leading Garmin, Wahoo and Sigma models, and not only in this discipline. Incidentally, the new generation of the Karoo does without the LTE module installed in its predecessor, as most cyclists have their own smartphone with them and this serves as a bridge to the internet.

Endurance: charging with the sun, saving with hardware

Garmin announced a new hardware module at Eurobike. Whether there will be a new Edge 1050 with extended memory, NFC chip and speaker at



Almost endless power: Garmin's eTrex Solar boasts solar charging and energy-saving chips ©Thomas Froitzheim

Garmin [11.1/C13] was still questionable at the time of going to press. The brand will be demonstrating its impressive expertise in the areas of energy efficiency and solar charging with the eTrex Solar, a handheld GPS device with a small 2.2 inch monochrome display, no map, but equipped with high-precision satellite reception, solar cells and a fixed battery. In practical tests, the device proves to be very energy-efficient even without permanent desert sun, but unfortunately has a typical Garmin hurdle: too many functions that need to be learned first. Like its smaller brother. the eTrex SE (which incidentally still uses Mignon cells), it is intended less for bike handlebars and more for hikers and mountain sports.

But it doesn't always have to be a solar module. **Sigma [12.1/C32]** achieves an endurance of up to 41 hours with its new Rox 4.0 Endurance thanks to energy-saving hardware. Bryton's new Rider 460 also scores points with its long runtime and enables 36 hours of operation without recharging.



together - here's the original komoot map on a Garmin Edge bike computer, but also on a smartwatch

Komoot - active on all platforms

Whether on a smartphone or GPS bike computer - the maps usually come from OpenStreetMap, and no provider in the cycling world has implemented the routing based on this as successfully as Komoot. The app now has over 40 million users worldwide and, alongside Google Maps, is the leading outdoor navigation app for cycling and hiking tours, far ahead of its competitors.

At last year's Eurobike, komoot presented its premium partnership at the Garmin stand - but other hardware providers are also actively involved.

Minimalistically practical: map sketch with junctions

If you can see not only the route as a line on your display, but also the next intersections, you can find your way quickly and easily. This simple but precise track navigation is also offered by Sigma's inexpensive ROX2 and ROX4 navigation devices. Planned or adopted routes are transferred to the Rox via a smartphone. Depending on the system, street names and turn-off information are also displayed and a warning is issued if you leave the route. The trend of extending map sketches with



The smartphone mounts from SP Connect are now also available in robust cases and wireless charging power banks

upcoming junctions can be seen on the Beeline Velo2 [Sushi Mobility F11/FD206], and this year Bryton is also showing a similar display on its new "Rider 460".

Bryton now with eBike radar **Bryton [11.1/A27]** is presenting the further development of its radar technology for eBikes at Eurobike. The two new modules do not require an internal battery and differ in that they are available with a rear light or as a pure radar module. Internally, they work with the same radar technology as the Gardia L300 model presented last year and can therefore detect approaching vehicles from a distance of 190 m and display them on a bike computer. Bryton emphasizes the integration into the Shimano ecosystem and equips its ebike modules with a CAN bus. However, connection to other systems is also maintained via ANT+ and Bluetooth.



Bryton's new radar modules for eBikes rely on integration into the Shimano system - and communicate via the CAN bus in addition to ANT+ and BLE

More than just a digital rear-view mirror

As a newcomer in the bicycle sector, Munich-based company AlpsAlpine [11.1/A27] is presenting a revised version of its "RS-1000" digital warning system, including new camera functions and the ability to integrate with systems from other providers. The detection technology remains unusual - the "digital rear-view mirror" uses optical pattern recognition rather than radar. A camera module mounted on the bike records the traffic behind and sends the signals to the handlebarmounted smartphone. The smartphone app calculates the approaching objects from the recorded values and informs the rider of the type of vehicle,



The waterproof handlebar switch for SON's new Ladelux switch has a magnetic contact because USB-C is not sufficiently robust

its speed and the expected overtaking maneuver - all against the background of the rear camera image. The LED tail light in turn warns the traffic behind with various light signals. However, the high-resolution camera, the WiFi

transmission and the processorintensive calculations take their toll. Although the

RS-1000 has its own battery, it is dependent on an eBike power supply for day trips. Such high-tech comes at a price: the RS-1000 system is available for 449 euros.



Sena: retrofittable helmet headsets

Voice control has become standard in the AI sector, but remains a challenge on the bike due to ambient noise. Offering a solution, communication

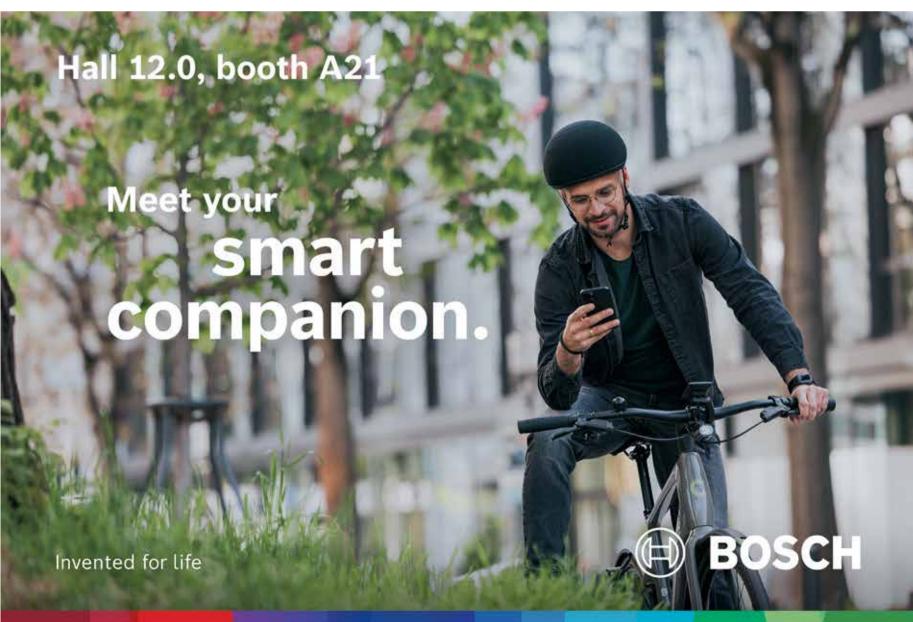


Even the best cycle routing systems would have guided you along the flooded Saar cycle path ©Klaus Wallach

specialist **Sena [F12/J03]** is bringing working samples of its new Bikomm headsets to Eurobike. Sena's optimized mesh communication is based on the Bluetooth standard and has so far only been offered permanently installed in the Sena S1 helmets. The new Bikomm headsets, on the other hand, can be retrofitted to existing helmets - and could therefore be a decisive factor for market penetration.

Connectivity: cloud specialists need hardware partners

In the connected world of transportation, bikes, cars and scooters don't just talk to each other, they also communicate with the surrounding infrastructure. How bicycle traffic fits into this IoT world is of course also a topic at Eurobike. **GPS Tuner [8.0/I12]** will be providing an insight into its collaboration with Commsignia, whose V2X [Vehicle-to-Everything) technology is intended





Digital rear-view mirror - without radar: Alps Alpine presents its RS-1000 assistance system with new camera functions and demonstrates its integration capability in third-party on-board computer systems ©Thomas Froitzheim

to significantly improve safety for cyclists and scooter riders, according to Matyas Kurta from GPS Tuner. The radio modules with which the individual vehicles are equipped serve as communication hardware.

Comodule [8.0/J28] currently reports two growing trends with regard to the digitalization of bicycles and e-bikes, particularly on the European market. On the one hand, there is great demand for more sophisticated anti-theft solutions: retrofittable GPS trackers, fully-fledged alarm systems with digital motion detectors and interfaces to security companies and insurers as a supplement to traditional bicycle insurance.

On the other hand, OEMs are developing increasingly sophisticated solutions that offer their customers a



Where most headsets fail, the new Sena BT headset offers good and far-reaching communication in outdoor use - and can now be retrofitted to any helmet: Sena Bikomm

digital experience in addition to the riding experience. "The digitalization of bikes is no longer just about the drive system. Today, lighting systems, locks, gears or speakers can also be controlled and further specified via a cloud interface," says Sven Bernhardt, Head of Sales at Comodule.

More robust than a USB-C socket

Whether it's a GPS device or a smartphone - the digital pilot constantly needs power, and smartphones in particular are dependent on recharging even on day trips. USB-C technology has established itself as a connection standard, but it is not sufficiently water-resistant for outdoor use. After numerous tests, SON has therefore opted for a special cable with a magnetic connection for its Ladelux.



"There's a bike coming from the left" GPSTuner shows how cars, e-bikes and scooters can communicate with each other via IoT modules

Actual information or artificial intelligence?

There is a lot to discover in the field of smart navigation at Eurobike - but much of it only at second glance.

The smartphone is always with you on bike tours - but it is really only fit for purpose with components suitable for outdoor use. And this year's Eurobike offers numerous solutions, such as energy-efficient navigation systems with displays that can also be operated in the rain, headsets with which you can really communicate and radar systems the size of a matchbox.

But even the best navigation systems rely on up-to-date data. In the age of the climate crisis with heavy rainfall, road closures and detours, navigation to shelters will become more important than ever. In the case of the flooded Saar cycle path, every



The hub lock from 2Lock combines two physical locking mechanisms in a single hub and can be activated/deactivated with a click in Comodule's Companion app

navigation system - from komoot to Google Maps - was overwhelmed and would have led right into the floods. A challenge for the next Eurobike?









Recycled raw materials: PP, Nylon, Eva, PU, ocean plastic, AT-Rubber, steel and CR-MO, etc.





VLG-1985



VLG-2098



VLG-2096



VLT-1001



VL-6090



VL-6522



VL-3636



VL-6574





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In this year, AFORGE has adopted new manufacturability to their lineup in China and VIETNAM, from forging, hydroforming to now THE GRAMITY CASTING! Gravity casting open model for Down tube (double layer) with motor bracket:



DT-051 with BOSCH's battery and motor BOSCH





BOSCH Motor Bracket

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At present, AFORGE Gravity Casting Department has sufficient capacity and ability of mass-producing the e-bike tubing and parts. From motor bracket, bracket integrated DT to double layer DT, Headtube connector and HT to DT to Bracket in one piece and even to ST together in one piece, AFORGE shows its dynamic productivity in various possibility of frame part, and being ready to embrace the era of new energy with all kinds of frame part manufacturability! (Hydroforming, Forging, to Gravity Casting)



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China Patent

ZL 2018 2 0212382.8 (Started since 2018.10.09)

Taiwan Patent 1676575 (Started since 2019.11.11)

European Patent 20 2023 102 762

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ROAD BIKES AT EUROBIKE

3D PRINTING COMES OF AGE AS A WHOLE-FRAME SOLUTION

3D-printed parts for bikes have been used on production frames for over a decade, but now the technology has matured to the point where it's possible to print not just components, but entire frames. The process allows frame designers to add and remove material with a granularity that's not possible with any other production method, and makes it possible to optimise ride characteristics on a per-frame basis by adjusting wall widths and internal structures. 3D printing with titanium is also much less resource-intensive than traditional manufacturing methods.



Pilot Cycles [12.0 / C05] is one of the first companies to fully embrace 3D printing at frame scale, and the Seiren is its first fully 3D-printed road bike. Two years on from showing a frame with a 3D-printed bottom bracket assembly at the Eurobike show. Pilot has moved into full-frame manufacture. Freed from the constraints of traditional tube profiles the frame has an organic feel, and using Finite Element Modelling the company has engineered the frame to be stiff around the bottom bracket for excellent power transfer, while designing in some flex around the seat tube area to improve comfort.

Is 3D-printing the future of bike frames? Pilot certainly thinks it has a part to play. "Having experienced the benefits of titanium additive manufacturing on first hand, we believe that the usage of 3D printed titanium could be the ideal solution to change and improve a bicycle industry dominated by carbon fibre," it says.

The Pilot Seiren isn't the only





3D-printed titanium frame you can see at the Eurobike show this year. Also early to the full-frame-printing party is **Hebei Hanglun Technologies [9.2 / C16]** which is currently the largest supplier of titanium bike frames in the world, producing over 18,000 frames annually. The company has invested in the creation of a dedicated facility and

plans to tool up with 50 printers over the next two years to ramp up production. At present the company uses precision casting for mass production, and 3D printing for small-batch customized products, but says 3D printing is perfect for smaller runs. "It can avoid the high manufacturing cost of single-piece or small-batch products, environmental pollution and other issues, as well as effectively shorten product delivery time and make production more efficient and convenient," the

company says.

The Hi-Light frame shown is completely 3D-printed from grade 5 6Al/4V titanium, and the company has successfully mass-produced similar integrated printed frames. It weighs approximately 1.5kg, features internal cable routing and is compatible with mechanical and electronic shifting.

The big groupset news this year has been the arrival of the next generation of SRAM's top-tier Red groupset, and **3T** [11.1 / B29] is one of the manufacturers speccing it. The 3T Strada Italia SRAM Red AXS is a bike that 3T has dubbed "the upgrade killer"; it says that out of the box, there is simply nothing to improve upon. The Strada Italia is made in Italy, and is a versatile road bike designed to blend comfort and aerodynamics. Designed

and aerodynamics. Designed and optimised for 30-35mm tyres, the Strada Italia uses the same filament



The 3T Strada Italia is available in a SRAM RED AXS build

winding and Resin-Transfer-Moulding (RTM) technology as other bikes in its range.

As well as the SRAM Red AXS groupset, the build includes a set of top-tier Zipp 353 NSW wheels, a Selle Sanmarco Shortfit Superleggera saddle and Vittoria Corsa Pro TLR tyres in a 30mm width. Even with the semi-deep wheels, the Strada Italia tips the scales at just 7kg. 3T's Head of Design Gerard Vroomen has always focused on aerodynamics. "Not just the theory, but real-world aerodynamics", he says. "So we test at 20mph (32kmh) and 30mph (48kmh), we test with bottles and other difficult parts, we sometimes even test dirty and muddy bikes."

Also available with new SRAM Red AXS is the latest incarnation of the **Orbea [11.0 / C12]** Orca. The Orca has been in the Orbea range for nearly twenty years now, and these days there are two frame designs: the Orca Aero, and the more minimalist climbing bike pictured. The M11eLTD PWR is at the top of the range, with SRAM's top-end groupset, Oquo Road Performance RP35LTD wheels and a Vision Metron 5D ACR EVO Integrated cockpit.

While some brands make a distinction between aero and lightweight frames, others are focused on hitting the sweet spot between the two. **Haro [F12 / G04]** is just such a company. "Who says you can't have it all?" Haro says. "The Rivette is our race-ready all-arounder, meticulously crafted from a mix of high-pitch carbon fiber



The Orca M11eLTD PWR is at the top of Orbea's lightweight range



Stabil mobil

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in custom size-specific layups for an unmatched blend of unwavering stiffness and feathery weight."

The UCI-certified Rivette uses aero tube shapes and fully internal cable routing to create clean lines and reduce drag, with a short rear end for explosive acceleration. The Rivette is available in three build levels, with the money-no-object Top Shelf build featuring a Shimano Dura Ace Di2 groupset, Vision Carbon Metron 45 SL tubeless clincher wheels and a size-specific one-piece bar and stem.

Passoni [12.1 / HM20] is an Italian brand well-known for producing timeless, high performance designs, but it isn't afraid of moving with the times. The XXTi Disco is one of the company's newest designs, and mixes titanium with carbon fibre as well as embracing the latest axle standards and groupset developments. The standard XXTi Disco frame comes with a unique integrated carbon seatmast



Haro's Rivette is designed to be both aerodynamic and light



Merida's Silex has MTB-inspired geometry for off-road performance



Passoni's XXTi mixes carbon and titanium tubing

with Passoni's Cicloprato you can venture off the beaten track





formed by an uninterrupted spar running from the bottom bracket to the saddle. Each user can tailor the XXTi Disco to their exact requirements and there's the option to switch to a more conventional seatpost assembly

if the rider needs the versatility of a removable seatpost to pack down their bike for transport.

If you still want to be aboard something beautiful when the tarmac runs out, then

Passoni has you covered with the Cicloprato. With full mounts for bikepacking gear and constructed from custom drawn tubes of the highest grades of titanium welded in a sealed chamber,

the Cicloprato promises unparalleled durability. The frameset will accept both 700c and 650b wheels, and the frame can be customised with extra mounts if you're planning to venture even further off the

beaten track.

Heading past the gravel and into harsher terrain?
You'll want a bike that blurs the line between gravel riding and mountain biking,

and the **Merida [12.0 / A14]** SILEX is just such a bike.

"When we introduced the SILEX, people didn't know what to make of this quirky-looking bike", says Merida. "Then they rode it - and the awards and positive reviews started piling up. The SILEX turns any ride into an adventure, opening up fresh possibilities for fun, whether you're doing the daily commute or a multi-day bikepacking trip."

The latest SILEX models are even more off-road capable than when the bike was originally launched, with bigger tyre clearance and a slacker head angle. You get cable routing that allows you to run your choice of 1x or 2x drivetrain, and any combination of guards, racks and luggage. Gravel riding in recent years has seen something of a split, with more race-focused machines and bikes designed for adventures and fun. "The SILEX continues to be spiritually closer to this kind of riding", says Merida, "which is why we have added more off-road capability without impacting the handling and versatility of the previous generation." The new SILEX is available in alloy and carbon fibre in a wide range of builds for all

> "Do you finally want a road bike that stands out from the rest?" That's the question that **Baldiso [8.0 / B37]** asks with its B1 model. Collaboratively engineered by Baldiso and CarbonWorks,

the B1 is a full carbon design that dispenses with the seat tube, allowing the frame to flex vertically for comfort at the saddle.

If you're wondering whether the B1 will miss the seat tube from a structural standpoint, don't worry: "The material that is saved in the seat tube can reinforce the crucial down tube", says Baldiso, "so that stiffness, stability, comfort and aerodynamics are at the absolute top level." As well as the team's direct experience, Baldiso also drew on the expertise of a leading German institute for FEM and CFD simulations for the strength calculations and aerodynamic simulations.

If the design isn't doing enough to stand out, then you can also choose your favourite colours and design for the frame set. And for a complete bike, you can also configure the groupset, wheels and other details completely according to your wishes.

Also doing its best to stand out will be the GORTZ Specialita on the stand of **Arko Bici [12.1 / HM04]**. Arko Bici is Slovakian framebuilder Marek Parajka, who's known for his custom steel frames. The GORTZ Specialita is a bit different, however, using a carbon fibre integrated seatpost mated to a stainless steel front triangle and steel stays. We're not going to be seeing the latest groupsets and discs here though: "I want to use rim brakes and a 1x10 groupset", explains Marek. "I want to show people that I don't need to follow the latest trends to have a unique road bike."

The bike is for Marek himself. "I've sold my top-end Shimano Dura Ace Di2 bike to 'upgrade' to this", he says. "Does that sound odd? For me it's not a big challenge to grab on top shelf components but this is also a way to achieve great satisfaction." At time of going to press the frame was still at the paint shop, so you'll have to head over to the Arko Bici stand to see the finished build.

If you're looking for a road bike that you can take with you on your travels, then there's a lot to be said for one that will fit in standard airline luggage. The **5LINKS [9.0 / B20b]** Mushashi is just such a bike: its demountable rear triangle allows the frame to fold up into a package that's just 70x78x44cm. Great for flying but it also means that it's easy to get onto public transport or keep in a hotel room. The frame is made in Japan from 7N01 alloy and the sliding fold mechanism takes just a minute to shrink the bike. At around 8kg it's also very light, making it easy to sling in the back of even a small car.



The GORTZ Specialita from Arko Bici is a custom carbon/titanium wonder

Lastly, you probably weren't expecting a 700c road bike from small-wheel specialists **Dahon [9.0 / F06]** but it's applied its "Speed Technology" concept to a range of bikes, and now there's a road bike too.

Dahon's Speed Technology is a suite of patented solutions designed to enhance the rigidity of traditional bicycle frames, forks, and other components. The innovation incorporates an unprecedented testing platform for bike frames, finite element analysis (FEA) software, and materials mechanics. It's designed to significantly boost the speed of bikes regardless of wheel sizes.

The Vélodon demonstrates 20%-30% better rigidity than regular road bike frames, according to Dahon. The head tube is heavily tapered and a uses special angle-bent design, known as the "Bend Taper" shape, greatly enhancing the rigidity of the front triangle. At the connection between the top tube and the head tube, a flattened reinforced section composes a unique triangular design, making the entire bike more robust and stable. The bike is built up using Shimano's Tiagra groupset and flat-mount mechanical disc brakes, with wheels built to Dashon's own specifications. **DA**



The demountable rear triangle on the 5Links Mushashi allows it to fold



Dahon's Vélodon claims 20%-30% more rigidity than regular road bike frames

MTB TYRES AT EUROBIKE

XC TYRES GET BIGGER & LIGHTER, E-MTB OPTIONS EXPAND

There have been some big developments in the sphere of fast XC tyres over the past year. Even though rims are getting wider, and tyres bigger, modern casing designs and construction methods mean than big-chamber, tubeless-ready race tyres are getting lighter and lighter.



The Python from **Hutchinson [11.1/B06]** helped propel Paola Pezzo to an Olympic XC MTB gold medal in 1996, and two new tyres – the Python Race and the Python 3 – update the classic XC race tyre for 2024. The Python Race has been developed specifically for the demands of elite level XC racing and is a direct product of Hutchinson's partnership with the Decathlon Ford Racing Team to aid their pursuit of World Cup medals and success at Hutchinson's home Olympic Games in Paris this summer.

Built for speed, the Race weighs in at just 600g in a single 29"x2.4" size and it's built on a casing with three 127TPI layers. Hutchinson's triple-density RRXC compound is used for the tread, which has a 1.5mm low profile central section for super-fast rolling.

The Python 3 is a direct successor to the Python 2 and original Python. The deeper tread of the Python 3 makes it a highly versatile option, and a 3x66TPI casing and bead to bead Hardskin layer offer excellent puncture protection. It's available in black and tanwall colourways in 2.3" and 2.4"

The Python 3 is the latest in a range of tyres dating back to the 1990s



sizes. More affordable non-Racing-Lab versions of the tyre will also be available in tubeless and tube-type builds.

The Aspen ST from **Maxxis [12.1/C19]** is a tyre that the pros have been using for years, and it's often been seen on Nino Schurter's rig. It's now available to buy in two different builds.

Maxxis describes The Aspen ST as "an ultra-low-profile race tyre designed primarily for short track XC use, sure to give any racer an edge in dry conditions." With sections of file tread interspersed with low-profile chevrons, the Aspen ST is about as low-profile as XC tyres come. Maxxis uses its MaxSpeed compound for the tread, which uses a silica filler to improve both speed and wet traction. In testing the MaxxSpeed compound reduced rolling resistance by more than 25%.

The Aspen ST is available in two builds in both 2.25" and 2.4" widths. There's a standard 120TPI casing and also an ultra-lightweight, limited edition 170TPI build. Both tyres are tubeless-ready and feature EXO sidewall protection.

Tufo [11.1 / A21] will be showcasing its XC11 TR tyre, a tubeless-ready





all-purpose tyre that's intended for XC and marathon riding. The XC11 TR is suitable for use on the front or the rear, and the low-profile tread is also good for light terrain, and riding that mixes asphalt with off-road sections. The tyre has recently been independently tested by the Bicycle Rolling Resistance website, which praised its levels of wet grip and best-in-class sidewall puncture protection.

Michelin [11.0 / A09] has updated the Wild Enduro Racing Line tyres to make them perform better than ever. There's a new casing that's built from two 55TPI layers, which Michelin says reduces flex in the tyre and improves stability when loading the tyre into corners. The tread is Michelin's Magi-X, which is developed from technology used in MotoGP and offers the highest level of grip for extreme use. The new compound is also worked into a number of new tread patterns. The MS pattern is designed to prioritise grip in softer conditions, with the MH pat-



Michelin's Magi-X compound is developed from technology used in MotoGP

tern is the choice for drier and rockier terrain. There's also a rear-specific tread which is designed to keep rolling resistance as low as possible.

If you're adding a motor to the mix, then your tyre requirements are a bit different. Michelin has you covered there too with the E-Wild Racing line of tyres. The new range takes a lot of inspiration from Michelin's existing Enduro tyres, and the E-Wild Racing Line Rear tyre has been specifically designed with an asymmetric knob pattern to maximise traction when climbing, so you can get the best possible assistance from your motor without spinning out. At the front there's plenty of grip on offer from the Magi-X compound tread.

If you're looking for a great all-rounder with an e-MTB build, then **Innova [9.1 / A37]** is offering the Podium tyre in a range of sizes for 27.5" and 29" wheels. The tread is aggressive, with siped knobs designed to improve grip. The Podium is built around a 60TPI casing with a folding bead, and tubeless and tube-type variants are available. The 27.5"x2.6" e-MTB tyre is ECE-R75 certified for use with high-speed ebikes.

Another good all-rounder is the E-Liner Plus AT from The E-Liner Plus AT from Chaoyang [Zhongce Rubber Group, 9.1 / B28], a big-chamber e-MTB-specific tyre that's ideal for mixed terrain. The E-Liner Plus AT is a 60TPI construction, with Chaoyang's dual-compound 2C-MTB rubber used for the tread. The reinforced, directional centre knobs offer a fast-rolling centre section, and the widely spaced shoulder tread provides cornering grip. The big 2.8" chamber offers plenty of cushioning for heavier e-MTBs, and the

The Innova Podium uses siped knobs to improve grip

are protected from cuts with the Chaoyang SPS system.

Vee tyre [12.1 / A03b] is introducing a new range of gravity tyres, called MTB 4-3-2. The range consists of tyres with four tread patterns, and there are three casing options and two tread compounds, so there's always something that will work, whatever the weather and trail conditions.

The Snap WCE is a tyre that Vee says is "built to excel in every trail condition and at the highest levels of competition". Available in 2.35" and 2.5" widths, the tread of the Snap WCE uses ramped knobs for high-speed rolling, and large vertical faces to bite under aggressive braking. The deep tread design and even spacing help to dig into mud and loose dirt and clear quickly for unstoppable all-weather grip. It's great in the wet or over loose technical terrain, combined with the Snap WLT with its spiked thread

The big 2.8" Chaoyang E-Liner Plus AT offers plenty of cushioning for heavier e-MTBs



design which provides excellent bite in gnarly conditions.

In drier and faster conditions Vee offers the Attack range, which it says "provides cutting-edge high-speed ability, unparalleled precision, and damping qualities that pros and weekend warriors alike appreciate." It pairs perfectly with the Attack FSX, which is Vee's tyre of choice for fast cornering and full gas descending, racking up multiple race wins in the Downhill and Enduro World Cups. With an evenly spaced tread for aggressive cornering, as well as excellent

high-speed braking, it's also a great bike park choice.

CST [12.1 / D27] has updated its popular Jack Rabbit tyre for 2024; "Our goal was to make an already great tyre even better", it says. The Jack Rabbit II has an updated tread design featuring an 'overlay bridge' in the pattern which links the knobs together and helps to ensure the best possible control and grip. The casing has been updated too, with the addition of a poly-fibre layer between the tread and the casing, which helps to guard against penetration punctures. The Jack Rabbit II is available in 60TPI and 120TPI builds and 2.2" and 2.35" widths. The range also features a tubeless-ready version.

Tubeless inserts are standard equipment these days, for racing in nearly all disciplines. An insert helps to stabilise the tyre, so that it maintains its shape even at low pressures, and it also protects against pinch flats, and sudden air loss through burping at the rim/bead interface. If you do suffer a puncture, inserts also mean you can continue a



as the Fusion insert. The Pro version is the insert designed for MTB, XC, Enduro and DH. The result of years of research and experimentation, it offers the best compromise for cyclists who need rim protection, run flat capability and lateral support when cornering without compromising the tyre and riding feel. The Fusion insert is aimed at the most aggressive riders in Enduro and DH. The combination of Pro and Lite inserts, Fusion offers maximum rim protection, lateral tyre support and the possibility of continuing to pedal in run-flat mode in the event of a puncture. Both the Pro and Fusion versions are available for 27.5" and 29" wheels for tyres with a minimum width of 2.10" and a maximum width of 2.60". The Aither 1.1 compound created for the insert does not absorb latex sealant, and is made up of 20% recycled material. **DA**



The Fusion insert from Tannus is aimed at the most aggressive riders



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EXOTIC E-DRIVES TAKE A DIFFERENT APPROACH

The main trends in e-drive systems are lightweight light-support systems on one hand and mid-drive systems that strike a balance between powerful support and moderate weight on the other. There are some different approaches however that deserve to be mentioned as well - from combining automatic transmissions with motors to very powerful mid-motors and retrofit solutions.

As China's most prominent supplier of e-drive systems **Bafang [hall 8** / **J16 and F10 / F14]** launched an interesting novelty at the China Cycle Show with its GVT technology. The abbreviation GVT stands for Gear Variable Transmission and according to Bafang this technology provides precise automatic shifting mechanisms and advanced transmission control, resulting in seamless and smooth gear changes with no shifters, cables

Service Control of the Control of th

With its GVT technology Bafang integrates automatic shifting into hubs with or without a drive unit.

or derailleur. Products featuring GVT technology are low-maintenance and well suited for the use of belt-drive systems. To begin with, Bafang will be introducing two product series: The G series multi-speed auto gear hubs can be combined with mid-drive motors while the H series auto hub motors pack the gears and the drive unit into the hub shell.

In August 2023 French sporting goods giant Decathlon turned heads in the industry when it presented the B'twin LD 920 E automatic. This e-bike for urban use came with a very innovative drive unit that Decathlon had developed in cooperation with Belgian company **E2 Drives [F12 / G26]** and

brought to the market under the Owuru brand. The unique feature of this mid-drive motor is that it provides both assistance and acts as a stepless transmission. As the gear ratio gets adjusted constantly, you get to pedal at a steady cadence without having to worry about support modes

or changing gears. The technology that allows for this is called Electronic Continuous Variable Transmission (E-CVT), and works by integrating two motors with a planetary gearset. The only real downside is the weight, as the entire Owuru drive unit hits the scales at 4.6 kg.

When French automotive supplier Valeo [hall 8 / G05 and F10 / 23] launched first iterations of its Cyclee drive unit in December 2020, it was a truly unique concept. By combining a powerful mid-motor with a maximum torque of 130 Nm with an automatic 7-speed gearbox made by compatriots Effigear, the Cyclee was a perfect match for oversized cargo bikes and trikes. For this use case its large dimensions were no issue, nor was its weight of 4.8 kg. The latest refinements of the Cyclee system are reduced noise and a new HMI solution.

The latter consists of a smart dock, an optional 2-inch touch screen and a rotating controller. The smart dock comes with a Phone-as-a-Key system that automatically locks the e-bike when the rider steps two meters away. And the inclusion of 'Velco Suite' adds a wide range of connectivity features.





F10 | BOOTH F01

Right next to the BMX Outdoor Area





Valeo has been focusing on theft protection and connectivity features with its Cyclee system.

Just like the Cyclee system, the M12 mid-drive motor of Truckrun [hall 8 / G061 prioritizes sheer power over weight considerations. After all, an of-



This retrofit kit by Nanchang LVBU is a low-key way to electrify gravelbikes and road bikes.

ficial weight of 3.6 kg to 3.9 kg for the drive unit, depending on the exact type and power output, is not something to base your advertising on.



Just swap the front wheel and enjoy some electric support with Nanchang LVBU's all-in-one retrofit kit.

The fact that this motor can dish out a maximum torque of 120 Nm to 160 Nm at 500 W and 750 W respectively puts that weight in perspective however. With this kind of power output the M12 mid-motor seems like a smart choice for heavy-duty applications, for example on large cargo bikes and trikes. And since this motor is compatible with the most common mounting interfaces on the market it does not require a costly redesign of this key frame section - which is pretty smart indeed.

While some safety experts warn

of retrofit kits that turn conventional bicycles into e-bikes, there is without a doubt a market for such products. Chinese supplier Nanchang Lvbu [hall 8 / O15] offers the KX series as an all-in-one solution that packs the drive unit, the electronics and the battery into one massively oversized hub that sits in the front wheel. This makes for a very easy installation: Just replace the original front wheel with the KX series unit and you are ready to go. There are more sophisticated retrofit kits as well, relying on a combination of a drive unit in the rear hub with batteries of different sizes, ranging from a low-key bottle style battery for e-road bikes and e-gravel bikes to larger external batteries that have



The Skarper retrofit kit can be mounted to any type of bicycle with disc brakes and chainstavs.

Last but not least English start-up Skarper [F12 / G13] has two USPs up its sleeve: first it claims that you can turn every bicycle that is equipped with disc brakes into an e-bike using its Skarper unit. And second you can take the Skarper unit off and ride your bike without electric assistance and only get a weight penalty of 600 g. This is due to the Disc Drive that is installed permanently instead of the original rotor. The unit housing the motor, the batteries and the electronics hits the scales at about 4 kg and can be installed or removed with a flick of the wrist.



Truckrun's M12 is a seriously powerful mid-drive motor that cranks out up to 160 Nm of torque.



EYEWEAR AT EUROBIKE

COMBINING SMART LENS TECHNOLOGY AND BOLD LOOKS

From oversized goggles to ultra-cool frames, the latest cycling eyewear has all the technology for protection and quick reactions on the saddle - and a bold touch to complement an on-trend outfit.





Shimano's updated Technium with Ridescape lens technology.

The updated Technium from **Shimano** [11.0/ A18] has it all. The wide full-rim frame protects eyes and lenses from dust and debris, and it has been reworked to make it a little edgier, with a multi-coated one-piece lens.

Much of the performance comes from its Ridescape lens technology, in three versions for road, off-road and gravel riders. "It's really developed to increase the contrast and emphasize the colours in different riding environments," explains Perrine Devin, Shimano's product planner for eyewear and footwear.

Other features are the gaps at the edge of the frame to allow for ventilation and to avoid fogging. The curved and shorter temples are meant to fit into a trail helmet.

Another selling point is that the Technium is made in part from bio-based materials. Its frame and lens integrate Arkema's Rilsan, with 45% of bio-based materials extracted from castor beans. Shimano's entire eyewear range for next year will use this component.

With the Twinspark, Shimano has packed some of the same benefits into a more affordable version. It targets

riders who want eyewear made for cycling, but who may not be overly fussy about category-specific lenses.

The Rev by **React [Optrel Sports 11.1/ C22]** has a pretty striking appearance as well, with a single purple lens. But the Swiss brand's latest eyewear mostly stands out for its ShadeTronic technology, which was launched less than two years ago.

React explained that it works with an LCD display that is integrated into the inner layer of the eyewear. It adjusts the tint of the glasses from filter category two to four in just 0.1 second.

All this happens using solar energy alone, with no need for batteries or other power sources. Photocells are built into the product to convert infrared rays into power, which fuels the LCD screen. This means the glasses do not require any batteries or charging device.

Adding to the tech sheet, the polarised lenses are scratch-resistant and shatterproof. The Rev's frame weighs just 24 grams, with adjustable temples, temple tips and nose pads. A smaller version of this Swiss-made



The Beat Race by 4KAAD.



The Motive by Smith.

eyewear is launching at Eurobike.

4KAAD [11.1/ D27] has also kept a close eye on the scales for its Beat Race glasses, targeting riders as well as runners and triathletes. Weighing 32 grams, the frame is said to be both durable and flexible.

Andreas Bennert, chief executive at 4KAAD, explains that the company started by making products for outdoor sports, but it's making inroads in cycling with a new photochromic mirror lens. "Mirror lenses have become popular, but they often get too dark when it's foggy," said Bennert. "We combine the fantastic look with lenses that work in different conditions."

Smith [11.1/ C06] has opted for a dual lens construction for its Motive performance sunglasses. They are meant to work in all settings – whether ripping down singletrack or in a road sprint.

The Motive uses a lightweight nylon frame that is said to be highly impact-resistant, with a slight wraparound fit and a half-frame design. The glasses use Smith's ChromaPop lens technology, which is meant to help color come out, to provide more clarity and better definition.



Stride sunglasses by Scott Sports.

Each frame comes with two interchangeable lens tints, one for bright sun and a clear option for low-light or night rides. Vents in the upper corners of the lenses help dispel heat and moisture buildup. The smudge and moisture resistant coatings provide easy cleaning and clear optics. It's easy to remove the glasses with one hand, with the auto-lock hinges holding the frames open.

The Stride's construction is among the most discreet this year. These sunglasses by

Scott Sports [12.0/ A20] are frameless, making for a sleek appearance and an uninterrupted line of sight.

This lightweight number again uses toric technology, which works to

neutralize the effect of the lens' curvature. The company has also added its Amplifier Lens Technology, for more contrast and clarity.

At the other end of the spectrum, there is the 8K goggle from **Ariete [9.2/D18]**. It's described as a large

fit, which is a bit of an understatement, since these bulky goggles cover nearly half of the rider's face, with a construction that protrudes on both sides.

Annalisa Mentasti, Ariete's chief operating officer, explains that the size is intended for comfort, and to provide a clearer view of the track. The goggles come with a purple multi-layer lens, anti-fog treatment, a tough but flexible frame, and a ventilation system.

The three-layer foam construction



TSG's mountain biking goggles.

swiftly evaporates sweat. The elastic strap has anti-slip silicone and a double buckle for quick adjustment.

Ariete adds that the goggles are carbon neutral. They are made at its plant in Varese, which has adopted more environment-friendly processes. The company has teamed up with Climate Partner to measure its emissions and to work toward carbon neutrality.

Targeting hard-riding mountain bikers, the latest goggles by **TSG**

International [11.1/C16] are more compact, but they also have a bold look. The Presto 3.0 integrates a durable, pre-curved cylindrical lens, which is said to be resistant to scratches. The flexible frame comes with triple-layer face foam and articulated outriggers.

The thick goggle strap allows for adjustments on both sides. Silicone grip has been added to make sure the goggles stay in place, even on bumpy downhill rides.

The Swift from **Alpina Sports [12.1/C36]** is more leisurely. The German supplier reckons the sunglasses could be used for a walk in the park as well as a gravel ride. They're made with "shatterproof" lenses from ceramic material. The rubberized nose wings and temple tips help the glasses

stay in place. **BS**



Alpina's Swift.

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DIRK ZEDLER: PAPER MANUALS STILL KEY

E-BIKE MAKERS BEWARE: DIGITAL USER MANUALS MAY NOT BE COMPLIANT

In these economically challenging times, we often hear that some players see potential for savings in the field of user manuals and declarations of conformity. Allegedly, the good news is that operating instructions may now be provided purely in digital form.

In fact, the use of digitalonly documentation poses a risk for manufacturers. In the Regulation on Machinery, the White paper only just published on this subject and the harmonised EN 15194 standard it is stipulated quite differently. The paper form for essential parts of operating instructions is still required. Purely digital documents are likely to be rejected in court or by a market

To give you an idea of the situation, we have compiled excerpts from the relevant passages of the new regulation and the applicable harmonised standard. The texts are the original ones, the only change that was made is highlighting in bold.

surveillance authority, which can lead to

expensive consequences.

The German association for technical communication - tekom Deutschland e.V. is also very critical about 'purely digital'. In this regard we also compiled excerpts from the editorial article "Die EU sorgt für Spannung" (The EU creates tension) published in the association's magazine "technische kommunikation" (technical communication).

New Regulation on Machinery

Regulation (EU) 2023/1230 of the European Parliament and of the Council

(...) Chapter II, Obligations of economic operators, Article 10 (7) and (8)

7. Manufacturers shall ensure that the machinery or related products are accompanied by the instructions for use and the information set out in Annex III. ...

In the case of machinery or a related product intended for nonprofessional users or that can, under reasonably foreseeable conditions, be used by non-professional users, even if not intended for them, the manufacturer shall provide, in paper format, the safety information that is essential for putting the machinery or related product into service and for using it in a safe way. ...

(8) Manufacturers shall ensure that the machinery or related product is accompanied by the EU declaration of conformity ... or, alternatively, manufacturers shall provide the internet address or machine-readable code where that EU declaration of conformity can be accessed in the instructions for use and the information ...

Definition "safety information" from the EU white paper on the **Machinery Regulation:**

Meaning of 'safety information that is

BICYCLE USER MANUAL TRANSPORTATION/ CARGO BIKE (...)

E-MTB

SPEED PEDELEC

essential' mentioned in the fourth subparagraph of Article 10(7) of the new Machinery Regulation:

It is understood that such information should, as a minimum, consist of information relating to assembly, start-up, use, maintenance and transport of the machinery, ensuring that, by following those instructions, the safety or health of the user or a third person is not at risk. This information should be consistent with the instructions for use.

EPAC standard 15194: 2018-11

6 Instructions for use Each EPAC must be supplied with a set of instructions for use in the language of the country in which the EPAC is destined to be supplied. In various countries local requirements relating to this kind of information may be valid (see EN 82079-1). It is obligatory that the instructions for use are made available in paper form. For more detailed information to enable access for vulnerable people the instructions for use should be available additionally in electronic form on demand.

(...)

The German Association for **Technical Communication Tekom** takes position

Lawyer Jens-Uwe Heuer-James commented in issue 05 (September/ October 2023) of the trade journal "technische kommunikation" of Gesellschaft für Technische Kommunikation - tekom Deutschland e.V. (translation):

Digitalisation is controversial

However, the comprehensive discussion of this approach has shown that digitalisation is not accepted everywhere. During the consultations, in particular consumers' associations criticised the

approach. The criticism of the associations was heard. For consumer products, the digitalisation of usage information in the sense of replacing paper documentation does not apply.

It is only possible to provide consumers additionally with an offer of digital user information.

Author: Jens-Uwe Heuer-James

Notes on the actual practice with BICYCLE USER MANUAL operating instructions

The most important thing to conclude from the applicable regulations and standards is: B2B purely digitally - yes, B2C purely digitally - no.

EPAC-MOUNTAIN BIKE/ Based on the facts, it can be concluded that digital component instructions are legal when components (drive systems, brakes, wheels, etc.) are sold by the supplier to the bicycle manufacturer.

The bicycle manufacturer or its trading partner, on the other hand, must hand over the standard compliant operating instructions for fullyassembled and ready-to-ride e-bikes, e-MTBs and e-cargo bikes in paper form when selling them to the end user. This means that this job is in the responsibility of the brand or the manufacturer of the fully-assembled bicycle.

As a bicycle manufacturer, you are one hundred percent without initial suspicion for a trade or market surveillance authority if you enclose printed instructions for the bicycle/e-bike in the respective national language.

This is in fact not always realisable. With some manufacturers that supply their products globally hybrid concepts have already been realised successfully in the past years. In other words, relatively concise operating instructions in several or many languages were printed. And this printed manual was or is supported by weblink or QR code with comprehensive, detailed instructions, of course specifically according to EPAC/e-bike categories. The instructions of the drive system and component suppliers are additionally made available within the "Technical support".

Both concepts were accepted without difficulties from the market surveillance and accident prevention authorities in many countries of the European Union, but also in the UK and Switzerland. This is how the manufacturers have managed, together with us, the three-dimensional balancing act of cost efficiency, customer service and release from liability.

That is, however, not always the case. We have been learning that for some years now from the proceedings of the authorities that we accompanied in Italy, France, Austria, Switzerland and, of course, the largest market for electric bicycles, Germany. This year alone, there have been already nearly ten. Dirk Zedler



DIRK ZEDLER

Since 1993, Dirk Zedler has been an analyst and expert witness on bicycle accidents and product failures for courts, bike and insurance companies, and private individuals. He got his start in the industry by working for a large bike shop from 1986 on, and now holds the respected advanced engineering degree known as "Diplom-Ingenieur".

Courts have recognized Zedler as an officially appointed and sworn expert on bicycles since 1994, and on electric bicycles since 2014.

The Zedler – Institute for Bicycle Technology and Safety has used this wealth of knowledge, derived from his and his teams work in thousands of court proceedings and expert's reports not only in Germany but from the US to all over Europe, to enhance research and development in the bicycle industry.

The Institute proactively minimises damage for cyclists and insurers. It sets the standards for the bicycle industry. It develops and builds testing equipment that is used by manufacturers to improve the riding performance and safety of their bikes, and by leading European bicycle magazines to test them. These tests can also protect manufactures from potentially upcoming lawsuits if they fulfil the necessary safety standards. The Institute's work provides a basis for European and American manufacturers to communicate with their Asian suppliers. Manufacturers can buy test equipment from the Institute or use its state-of-the-art testing labs.

The Zedler Institute also prepares risk assessments. conformity documents, workshops, recall papers und user manuals for bicycles and pedelecs. These manuals, now available in more than 40 languages, help consumers use their bikes properly - and in many cases have protected manufacturers from liability.

Our experts draw on the wealth of experience gained through several thousands of expert's reports to train experts from in and outside the bike industry, such as automotive experts.

What we have learned from court cases, the proceedings of the market surveillance authorities and recalls is the content of our training courses for bicycle manufacturers. As a result, they are in a position to set up CE conformity processes internally.

For more information, visit www.zedler.de

PORSCHE EBIKE PERFORMANCE ICONIC BRAND REVS UP FOR P2 LAUNCH WITH AMBITIOUS PLANS

The electrification of bicycles has expanded the industry's customer base, upped manufacturing quality and attracted the interest of large players from other sectors. Iconic sportscar maker Porsche is setting the pace within the automotive industry – and has ambitious plans for its Porsche eBike Performance subsidiary, joining forces with the PON group.



In the early 20th century companies such as Opel, Peugeot or Bianchi were all building and selling cars, motorbikes and bicycles under the same brand. This changed after the Second World War as urban planners went all-in on cars and firms abandoned their bicycle businesses. Starting in the late 1980s some car manufacturers licensed their brand and logo for use on bicycles built by others. Porsche also did this through its Lifestyle division, showing more ambition than most others by cooperating with premium brand Rotwild. In 2021 the iconic sportscar maker changed its bicycle strategy. motivated by a dynamically growing market helped by electrification, the Covid-19 pandemic and improvements in road infrastructure.

Porsche's investment in Croatian

The compact and lightweight Ride

of Porsche eBike

Performance.

60 system of Fazua for now is the flagship e-sportscar manufacturer Rimac Automobili served as an appetizer. At the same time, investments were made in the e-bike manufacturer Greyp Bikes, expanding to a majority shareholding at the end of 2021. In the summer of 2022 Porsche eBike Performance took shape as a joint venture with Ponooc Investment B.V. following a thorough evaluation of the e-bike market and the opportunities it offered. "We managed to convince the board that developing, producing and commercialising an e-drive system of our own would be a promising addition to Porsche's core business," recalls Dr. Jan Becker, CEO of Porsche eBike Performance. "Next up, we acquired Bavarian start-up Fazua [F12 / G23] as a specialist in compact and lightweight e-drive systems. This way we got hold of a lot of knowledge and talent in existing teams, speeding up our entry into this

Porsche eBike Performance's staff currently stands at around 350, with about 220 working at the Ottobrunn headquarters and the rest in Croatia. That overall number has grown by about 100 employees since taking over Fazua. While the Greyp e-bike production may

new business.'

have been discontinued, the innovative software and UI solutions developed for it are part of the company's plans for its own Porsche and Fazua e-drive systems. "Following Porsche's brand image, we will focus on an excellent weight-to-power ratio with Porsche's



CUTTING EDGE LONG CARBON FIBER INJECTION MOLDING FOR SUPER-LIGHT AND SUPER-STRONG PEDALS

- Body built from ultra-light long carbon fiber
- Large foot support area and threebearing rotating structure
- Long carbon fiber injection molding technology provides the ZP-115 with light weight and highstrength physical properties, ensuring that pedaling force is transmitted to the crank without loss.





- Formed from die-cast anodized aluminum then CNC milled to produce a mirror-like surface with an exquisite metallic texture
- Bearings: heavy load capacity with super-smooth rotation
- Large tread surface
- 9 anti-slip pins distributed along the rim



The large LOGO is machined into the anti-slip tread surface formed with CNC milled grooves. The anodized die-cast aluminum body can be electroplated in a variety of colors, creating a striking contrasting color with the metal milling white.

The Zeray Advantage—FEIMIN

Zeray is a brand belonging to FEIMIN, founded in 1996. FEIMIN has been creating and supplying components to several of the most iconic bike brands for many years, giving us around 35% of the worldwide market share in pedals.



No.89, Zhenyong Road, Jiangbei District, Ningbo, China. www.http://en.julonginc.com/



Dr. Jan Becker has been at the helm of Porsche eBike Performance from the start as CEO.

e-drive system, not cutting into Fazua's lightweight business. The first step will be to tailor the system for use on high-end e-mountainbikes from various manufacturers. In addition, 'P2 - powered by Porsche', develops Porsche e-mountainbikes equipped with our system. Like Porsche eBike Performance, P2 is a joint venture between Porsche and Ponooc, an investment subsidiary of PON Holdings," Becker explains. These bicycles will be sold through IBD channels, including click & collect options.

Don't hold your breath however, as both Porsche eBike Performance's e-drive system and e-mountainbikes from the 'P2 - powered by Porsche' company won't hit the market before 2026. While Porsche had relied on its distribution channels for the bikes built by Rotwild, the 'P2 - powered by Porsche' brand will be available through IBD channels only. Given the current challenging market conditions, there is no need to rush the development, Becker stresses: "We are entering a phase of more intense real-world testing of prototype mid-motors to make sure we get all the details right, and I'm excited to be part of the test crew myself. But of course we are not only relying on impressions from test rides. As part of the Porsche

SIA5121F

corporation we also have access to an AI-supported quality control called Sounce by MHP. We use this technology to detect possible deviations during various steps of the production of Fazua's drive units."

This Al based evaluation can give valuable clues for further improvement by analyzing the characteristic structure-borne sound patterns of different components and identifying interferences in real time. Porsche eBike Performance is vying for one of the coveted Eurobike Awards this year with its use of Sounce technology. As for the show itself, the focus will be on the Fazua brand and its Ride 60 e-drive

system. "Apart from its low weight, the natural riding experience is one of the key USPs of Fazua's e-drive system. For this reason we aim to get as many people on test bikes and take them for a spin on the extended test loop at Frankfurt's fair grounds."

As for the overall market situation, Becker is moderately optimistic: "We are keeping a close eye on inventory levels and ordering activities of bicycle retailers and OE manufacturers. Based on our observations we expect the market to stabilize by the end of the year and then return to an annual organic growth in the middle single-digit percentage range." LVR

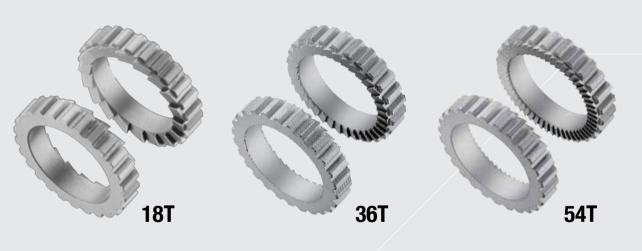




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Kun Teng company has independently perfected the technology to come up with our own MIT ratchet system hub. The process is highly technical and extremely difficult to get right. We have done it and are now looking to ramp up production in the face of strong demand. Get in touch with us now for a discussion on how we can help you.

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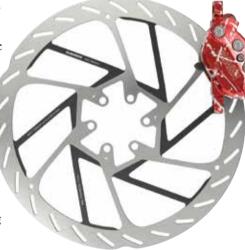
STOPPING POWER FOR EVERY KIND OF BIKE

From a new benchmark for road disc brakes to a gravity classic that has been revamped from scratch and a real-heavy duty brake system for cargo trikes and quads, there are plenty of new brake systems on display at this year's Eurobike.



With a few exotic exceptions such as some kids bikes or uber-light hillclimbing bikes, almost every bicycle produced nowadays comes with disc brakes. For this reason, products matching almost any price point and kind of use are readily available. The disc brake-related highlights at this year's Eurobike show include a new benchmark for road bikes, the return of an iconic disc brake for gravity racing and powerful brake systems for cargo trikes and quads with a built-in parking function. As hydraulic lines are increasingly routed internally, manufacturers are looking into ways to reduce the diameter of the brake lines and make it easier to route the lines through the frame. This also allows for disconnecting the master cylinder and brake lever without the need to bleed the entire brake right after. One example worth mentioning in this regard is Magura's Easy Link technology as a user-friendly innovation speeding up both assembly and maintenance.

Two new disc brakes are on display at the booth of components supplier **SRAM [hall 12.0 / A16]**, and they hardly could be further apart in terms of concept and use. News of the new Maven four-piston brake broke in late February. Running on mineral oil rather than DOT brake fluid, the Maven delivers up to 50 percent more stopping power than the Code series,



The Maven is SRAM's strongest disc brake to date - and it works with mineral oil.

SRAM's most powerful disc brakes for mountain bikes to date. And it does so at operating forces that have been reduced by 32 percent, reducing fatigue in the rider's hands and lower arms on long descents. The secret of the Maven's power sits in its chunky calipers: four large bolts reduce flex, and pistons with oversized diameters allow for more pressure to be applied to the (also oversized) brake pads. The Maven disc brake hits the market in Bronze, Silver and Ultimate versions, with a limited Ultimate Expert Kit as a launch edition.

SRAM's second new disc brake is

part of its flagship RED AXS road groupset and its HDR shift-brake system. Plenty of machined recesses in the 2-piece caliper help to cut weight and to direct air past the brake pads to keep things cool. Positioning the caliper in a more outboard position is one way to set a new benchmark for road bike brakes. The other reason are the shift and brake levers: as the carbon brake levers pivot further up on the hoods, the effective leverage on the master cylinder gets larger without increasing the operating forces. This results in true one-finger braking with plenty of power and excellent modulation. The new Paceline X rotors have been tweaked for quiet braking. Thanks to lightweight alloy spiders, these centerlock-only rotors offered in 140 mm and 160 mm diameters help to cut down weight. According to SRAM the new road disc brakes weigh 83 g less per pair than their predecessors.

While the new RED AXS disc brakes are aimed at competitive road cycling, TRP, the high-end division of **Tektro** [hall 12.0 / B17], is aiming at dropbar niches with its latest innovation. The Hywire and Hylex levers are built to fit dropbars of road bikes with hydraulic disc brakes. While the Hywire comes with shifter buttons on the right side to control Pinion's electronic gearbox or MGU e-drive system, the Hylex version does not need any shifters since it has

Connect or disconnect hydraulic hoses without having to bleed the system thanks to Magura's EasyLink technology.

been designed for singlespeed drop bar bikes. Both the Hywire and Hylex levers are built to be combined with flat-mount brake calipers that work with lightweight rotors with a thickness of 1.8 mm. These calipers come in an understated matte black anodized finish. Their top-loading pad design make for easy changes and a newly



Gustav is back as Magura's new benchmark for gravity-oriented disc brakes.



For its XCR Pro E4 brakes, Hope combines lightweight levers with four-piston calipers.

formulated mineral oil circulates in brake hoses with a diameter of 5 mm.

Borrowing a lot of technology from motocross bikes, the Gustav M disc brake was key for Magura [hall 12.0 / A18] to enter the mountain bike market in the 1990s. The brake was named after the company's founder Gustav Magenwirth, and the 2025 model year marks the return of the Gustav Pro. This four-piston brake system is tailored for long and steep descents. The pistons in both the master cylinder and the caliper have been increased in diameter in order to reduce the pressure within the brake lines and thus their deformation. This and the stiff caliper make for a crisp pressure point. As the contact patch

between the brake pads and the rotor has been increased by 40 percent, the Gustav Pro delivers plenty of stopping

Available with two or four pistons per caliper, Clark Cycles's React disc brakes offer real value.

power and excellent modulation. The bigger brake pads and rotors with an increased thickness of 2.5 mm also dissipate heat better, reducing fading on long descents. For perfect ergonomics, the lever of the Gustav Pro comes with a tool-free reach adjust mechanism.

English CNC wizards **Hope Tech**[hall 11.1 / D17] have built a reputation for reliable and gorgeous parts and components, and disc brakes have been a key element in this. Having released its 4th generation of opensystem hydraulic disc brakes as the weight-optimized X2 version with two pistons, the more powerful E4 version with four pistons and the full-on gravity model V4 in years past, Hope Tech now mixes elements of the X2 and E4 systems to get a powerful disc brake that is still decidedly lightweight. The XCR Pro E4 is built for use in on

downcountry or trail bikes, and its one-piece calipers and master cylinders machined from aluminum are available in a selection of anodized colours. To save weight, the compact master cylinder comes with a carbon brake lever, and titanium hardware throughout and the crimped hose fittings help reducing the weight even further. For easy fitting, the levers of the XCR Pro 4 come with a hinged handlebar clamp and pads are inserted into the caliper from the top.

Last year Clarks Cycle Systems [hall 9.1 / B23] launched its upperend CRS label (short for Clarks Race Series) with a 2-piston and a 4-piston disc brake system to choose from. These stand out due to their machined calipers and lever assembly. This year the company is back to its core business and rolls out the value-oriented React series – again in a 2-piston React 2 and a more powerful 4-piston React 4 version, weighing in at 305 grams and

315 grams respectively. Just like their more expensive siblings the React series runs on eco-friendly mineral oil, and the caliper pistons are self-adjusting. To suit all hand sizes, you get a lever reach adjustment, and the split bracket facilitates mounting and assembly. In a bid to cover all bases on the OE market, the ISO 4210-compliant React series' stainless steel rotors are offered in both 6-bolt and centerlock versions and in 160 mm, 180 mm and 203 mm diameters.

Since its foundation in 1981, **Alhonga [hall 9.1 / A41]** has been focusing on bicycle



Alhonga's 534 Series disc brakes are designed to slow down heavy e-cargo bikes.

brakes, with its headquarters in Taiwan and an additional factory in Vietnam. Putting a strong emphasis on the OEM and ODM side of business, the company's offerings cover a wide range of needs, from lightweight two-piston disc brakes to heavyduty four piston models that can be outfitted with splitters for the use on

This four-piston caliper of Ride Rever has been adapted to work with 2.3 mm thick rotors, and the lever has been beefed up as well.

cargo trikes or quads. Alhonga's new product at this year's Eurobike show is dubbed HF-534 and it has already won a D&I Award at the Taipei Cycle Show in March, Its sturdy four-finger brake lever comes with a ball-end and a dedicated parking function with an additional lock. The calipers of the 534 series are made of aluminum and are available as two- or four-piston versions. They are built to work with rotors with a thickness of 2 mm. These rotors are available with either a 6-bolt or centerlock mounting pattern and in 160 mm, 180 mm or 203 mm diameter. As for the hydraulic fluid, Alhonga relies on mineral oil that circulates in expansion-resistant hoses with a diameter of 5 mm.

Formerly known as Pioway and specialized in producing quality nuts and bolts, Samonix [hall 9.1 / F26] has recently changed its brand name for trademark reasons and entered the market for disc brakes in 2019. Its highlight at this year's Eurobike is a properly beefed up regenerative disc brake set for cargo bikes. From the sturdy four-finger brake levers with an integrated locking device to options to easily guide the brake fluid from one lever to two calipers, this brake system is ready to take on the heavy weight of large cargo bikes - or trikes and quads. A look at the rotors made of 3 mm thick steel plates rather than the common 2 mm or the

oversized 2.3 mm and the 5 mm ceramic brake pads show that reliability and heat resistance were prioritized over weight considerations throughout the design. One specialty is the use of a 5 V Hall sensor known for reliability and longevity to detect any brake action and activate the regeneration in order to support the brakes in slowing down heavy loads.

As Jagwire's brand for all disc-brake related needs, Ride Rever [at MCG, hall 12.0 / B24] has also tweaked its disc brake offerings with various cargo bike options as of late. These are rated to work for overall system weights of 250 kg to 350 kg. It all starts with sturdy four-finger brake levers with an optional parking function and built-in Reed sensor to cut off support of the e-drive system and a IP66 certified waterproof cable for a rear brake light or power cut-off. The rotors have been beefed up to 2.3 mm thickness steel, and the brake pads also have more meat on them to last longer under heavy loads. As for the calipers Ride Rever has options with either two or four pistons, and two

The heavy-duty disc brake of Samonix comes with sturdy levers and splitter for

the hydraulics.



TRP dives into electronic shifters with its Hywire levers.

Pro LR2-E rotors with 6-bolt or centerlock mounts.

These two-piece rotors feature a built-in magnet that works with the speed sensor of e-bikes. While the diameters from 160 mm to 203 mm are made of 1.8 mm thick steel, the 220 mm version is beefed up to a thickness of 2 mm.



Jagwire has neatly integrated a magnet into the alloy spider of its Pro LR2-E rotors.

OVERVIEW: PEDAL-POWERED GRAVEL BIKES

GRAVEL GALORE: FROM RACE MACHINES TO BIKEPACKING BEASTS

Gravel continues to be the segment that keeps on giving. Bringing in new riders, invigorating established ones, and broadening the appeal of cycling to the public, it's one of the few areas where many brands have seen sustained growth. Still a relatively young discipline, innovation in gravel bike design remains high. However, several micro-trends are now discernible, with a notable split between faster race-orientated bikes and machines more focused on providing extreme trail-focused capability.



Haro [F12/G04] is a brand with plenty of capital among those who started out in BMX. It's recently had a refresh and now creates a full spectrum of aggressive bikes, including a range of quality road and gravel machines. The Buzzard is a versatile carbon gravel bike with a long front triangle for stability and a short rear end with flared 415mm chainstays that aim to impart whippy handling. It's made to be confident going fast or long and comes with in-frame downtube storage and a bevy of 18 mounts to accommodate racks, fenders and panniers for multi-day adventure rides. Its frame is compatible with SRAM's Universal Derailleur Hanger (UDH) concept and includes clearance for tyres up to 45mm wide in the rear. The platform is offered in four sizes, four spec levels, and two colourways.

The **BH [12.1/A20]** GravelX aims to go fast with a mix of racing-style performance features twinned to the firm's SRS vibration filtration system. The Airbow Gravel fork matches the frame in accommodating tyres up to 45mm wide, ensuring stability and versatility. This is paired with compatibility with twin-chainring drive systems and a revised wider chain line that reduces the chance of the chain buzzing the tyre in rough conditions. The SRS system sees the distinctive seat stays and pronounced openings in the chainstays, both tailored towards absorbing vibration for a smoother ride and less fatigue. Integration is another key design concern and is evident in the bike's internal cabling, integrated seat clamp, and a unique compartment



under the down tube for essentials like a mini pump and CO2 cartridge. The bike is also among the first to feature Shimano's new GRX Di2 groupset (see below), combining twin chainrings with a 12-speed cassette to offer a better range and smoother gear transitions.

Ridley's [12.0/B21] versatile Grifn bike lineup has expanded with the lighter, faster carbon Grifn RS, the more affordable alloy Grifn A, and the electric e-Grifn. The new RS offers a 5% reduction in wind resistance and a weight reduction of 195g compared to the original Grifn. Tyre clearance has been boosted to 42mm, although its racy design and geometry have been retained. Features include internal cable routing, versatile mounting options, a diffuser fork crown for lower

drag, and a removable front derailleur mount. The E-Grifn is Ridley's first performance-focused ebike and comes equipped with a Mahle X20 hub motor, 350Wh internal battery, and the option for an extra 171Wh range extender external bottle battery. It shares the same geometry and clearance as the conventionally powered version, although it misses out on some bag mounting options. Finally, the Grifn A is an affordable aluminium option with the same 445g full carbon tapered fork as the standard Grifn. Elsewhere in the range, the original Grifn's gains XXS and XXXS sizes, which is good news for smaller riders.

Swiss bikemaker **BIXS** [11.1/**B34**] has filled the gap between its established road and mountain bike ranges



Ridley's Grifn lineup grows with the lighter and more aero Grifn RS, the affordable alloy Grifn A, and electric e-Grifn

with a pair of brand-new gravel bikes: the speedy Gran Turismo GR and the burly Traverse 1. The first uses a carbon chassis and broad stance fork with a pronounced forward extension paired with BIXS' own one-piece carbon cockpit. The bike's high-end billing sees it receive an SRAM RED ASX 12-speed groupset and Zipp's 303 SW wheelset, which arrives with 40mm WTB Vulpine tan wall tyres. Despite its racing credentials, the bike comes with a full complement of mounts above and below the top tube. plus the clearance needed for various setups. More accessibly priced is the Traverse 1, which offers an alloy frame and a 30mm travel Rockshox Rudy suspension fork. Its burly build kit suits it to aggressive technical riding, a facet boosted by its KS LEV-Si 100mm dropper seatpost and 42mm wide Onza Grava skin wall tyres. Shimano's GRX groupset takes care of both shifting and braking.



Swiss bikemaker BIXS offers a pair of brand-new gravel bikes, the speedy Gran Turismo GR and the burly Traverse 1

Megamo Silk range includes mullet drivetrain options pairing road bike shifters with mountain bike derailleurs



Girona-based Megamo [12.0/B46] has released a complete range of gravel bikes this year. Its Silk range features four models, all based around a frame that supports both single and doublechainring drivetrains and includes an SRAM UDH derailleur hanger, allowing the use of SRAM MTB derailleurs for mullet drivetrains. This configuration pairs road bike shifters with a mountain bike derailleur and is utilised on the Silk AXS 01 model, which features an SRAM Apex AXS electronic drivetrain and an Eagle 10-52t cassette. The bike comes fitted with 40mm Pirelli treads on Zipp 303 S Carbon wheels and can accommodate tyres up to 45mm for varied terrain. The bike's geometry offers a longer reach and lower bottom bracket to promote a more aggressive riding position, while shorter chainstays enhance agility and acceleration.



Superior's new XR aims to cover on and off-road duties and provide two bikes via one frame

Superior's [11.0/C10] new XR aims to be one frame and two bikes. This carbon bike can adapt to become a Gran Fondo or Gravel platform. With clearance for 45mm tyres, these can be swapped down to transform it into a more tarmac-happy bike. Whichever mode you choose, you'll benefit from reduced weight compared to previous editions. Other features include a clean and minimalist design, hidden front axles and a streamlined look. The firm offers a wide range of builds covering road and gravel applications, with the latter based around Shimano's GRX and Ultegra or SRAM's Red ASX groupsets. Other options include a choice of alloy two-piece or carbon-integrated cockpits and a range of different paint choices. All gravel builds arrive with 40mm tyres.





The Lorax TI from Esker Cycles is as much a drop-bar mountain bike as it is a gravel bike

Specialized [F12/J01] has just launched what it claims is the lightest alloy gravel bike frame. Featured on the Crux DSW, it will likely become a high-volume seller if it can live up to its promise of providing a high-performance gravel race bike at a lower price point. The 56cm Crux DSW frame weighs a claimed 1,399g and comes paired with the firm's S-Works Crux's carbon fork for a total frameset weight of 1.98kg. A complete Crux DSW build weighs a reported 9.37kg. It manages this partly thanks to Specialized's D'Aluisio Smartweld (DSW) technology, which involves hydroforming tube shapes with precisely matched joints, resulting in a unique single-piece downtube and bottom bracket. Many features carry over from the carbon Crux, such as a cage mount at the base of the downtube and clearance for 47mm tyres. A singular build features an SRAM Apex mechanical groupset with hydraulic disc brakes, an alloy finishing kit, and DT Swiss's gravel-specific G540 wheelset fitted with 700x38mm Specialized Pathfinder Pro 2BR tyres.

The third generation of Esker Cycles' [11.0/D20] Lorax Ti begs the question: when does a gravel bike stop become a drop-bar mountain bike? This super-capable bikepacking and adventure-focused bike features a titanium frame with geometry for a 120mm suspension fork. This combines massive mountain bike-style clearance for 29x2.6-inch tyres and internal dropper post routing. The Lorax is equipped with external cable routing, a threaded bottom bracket, and 22 attachment points for your adventure accessories. It also features the firm's future-proof Portage Dropout System, which allows you to use different spacings and axle standards, geared or single-speed drivetrains, or add a fitting for SRAM's new UDH system

Tritao [12.1/HM02] is another firm that makes a titanium gravel bike with clever dropouts and ultra-wide tyre clearance. Its Aveiro 3D features a

3D-printed parts to

29x2.3 inches

offer seamless finishing

and space for tyres up to



The BH GravelX mixes racing-style performance features twinned to the firm's SRS vibration filtration system

printed chainstay yoke and dropouts, which provide space for tyres up to 29x2.3-inches. These are then seamlessly welded into the frame at the brand's facility in Portugal. The Aveiro's geometry is based around a relatively short rear end, a long front centre and a slack head angle. This combination aims at stability on fire roads and confidence and fun when descending. The bike is designed to fit modern 1x wide specific road cranksets, although the firm can print a custom voke that will allow for the use of a 2x drivetrain at the expense of a degree of tyre clearance. Other features include routing for a dropper post, full cable integration for brakes, electronic and mechanical 1x transmissions, and three bottle cage mounts. It ioins the brand's more speed-focused Groont and Groont Intergrado models.

Eurobike's Handmade Area [12.1] is prominently located in the centre of Hall 12.1. It features 500 m² of handbuilt bicycle goodness from 40 smaller artisan frame builders and individual bike manufacturers. Gravel bikes will be among the largest segments on show. Among those on offer will be the Ciclopratio from Monza-based Passoni [12.1/HM20]. This madeto-measure gravel bike is a typical Italian take on the genre with nippy handling and minimalist detailing that shows off its titanium construction. Its owner can customise a range of facets while building a spec list that includes 650b or 700c wheels and a choice of mechanical or electronic groupset.



The Handmade Area includes bicycles from 40 smaller artisan frame builders. including Passoni

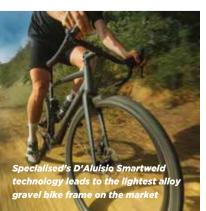


Shimano's new 2x12-speed GRX RX825 Di2 groupset bets plenty of gravel riders aren't done with 2x

Most builds draw heavily from nearby manufacturers, including Campagnolo and Columbus.

Finally, some component news. Undoubtedly soon to appear on many gravel bikes is Shimano's [11.0/A18] new 2x12-speed GRX RX825 Di2 groupset, which combines electronic shifting with a broader range of gearing options. Key features include refined Dual Control levers. a Shadow RD+ rear derailleur for improved chain management, and a gravel-specific front derailleur for precise shifting. The GRX 12-speed Di2 system offers fast, accurate shifting, a wireless cockpit design, and 12-speed gearing with double chainset options. including 48/31t chainrings paired with 11-36 or 11-34t cassettes. A central, multi-port battery powers the system, providing stable, long-lasting power and simplified charging. Accessory Di2 shift switches add extra shift buttons on tops, drops, or aero bars, maintaining consistent effort without hand movement. The wireless cockpit design's raised hoods, ribbed texture, and anti-slip brake levers ensure ultimate hand security, while flared drop bar optimisation aims to eliminate pressure points.

Shimano's component-making arm PRO [11.0/A18] has updated its cockpit components for enhanced aerodynamics. The Discover Aero Carbon Handlebar and Stem combine speed and efficiency with comfort, control, and precise bike fitment. Designed for gravel racers and adventurers, the handlebar features a compact drop with 12 degrees of flare, aerodynamically optimised tops with a downslope for neutral hand support, and a 4-degree forward sweep that encourages an aerodynamic body position. Its carbon construction, reinforced with Dyneema fibres, reduces vibrations to minimise fatigue. The accompanying Discover Stem 10 is made from AL 7075 alloy using 3D forging and CNC machining and offers a flipable ±10-degree angle for a precise fit. **JD**





OVERVIEW: E-BIKE BATTERIES & COMPONENTS SMART TECH IN BATTERIES AND COMPONENTS

Batteries, sensors, HMIs, displays and other e-bike components are key to moving the e-bike revolution forward. At Eurobike, meet manufacturers that are innovating to meet the demand for advanced, high performance solutions.



ZF battery sockets allow easy connection of components.

Based in Eurobike's former location of Friedrichshafen, **ZF Micro** Mobility [Hall 12.1 / A09] is part of ZF, a global technology company that electrifies a wide range of vehicle types, supplying mobility systems for passenger cars, commercial vehicles and e-bikes. The ZF Bike Eco System offers two batteries - with 504Wh and 756Wh to meet the requirements of bike manufacturers. The batteries are built with the latest cell technology integrated into a 48V system and the sockets on the battery terminal allow short distances and easy connection of components in the back. In addition, ZF HMI solutions features a core controller in the top tube that guarantees a simple and intuitive user experience while the plug & play touch display and remote control gives cyclist full control at all times.

A global leader in precision components and green energy technology, **Darfon [Hall 8.0 / H08]** provides products widely used in PC peripherals, intelligent modules, automotive electronics, passive components, and

high-precision positioning modules among others.
At this year's Eurobike, Darfon is

The new range extender from Darfon weighs just 1.1kg.

compatible with Shimano e-drive svstems. introducing four new batteries and a new range extender, all compatible with Shimano e-drive systems. The four batteries, E2C0F, E3C0E, EC03D and E4C0O, are in-tube integrated units using CANBus and Uart communication protocols and range from 400Wh to 800Wh and support the option of a range extender. The E1C05 200Wh range extender offers a lightweight option at only 1.1 kg, enabling extended rides.

The new E4C0Q battery

from Darfon provides

800Wh and is

Developed with Darfon, the new double-battery system from **Astro**[Hall 9.1 / D22] integrates perfectly with the company's lightweight technology. Astro's dual-battery design



AVS RC8-FS HMI comes equipped with optional BLE and 4x RGB multi-color backlight illuminated buttons.

stems from consumer riding habits data, revealing that most city and trekking cyclists travel about 30km, most often even less, per trip. A single 700Wh-800Wh battery, weighing around 4kg, is often excessive for short rides. By splitting this capacity into two smaller 360Wh packs, Astro allows riders to use just one battery for short trips, reducing weight and enhancing efficiency. For longer rides, both bat-

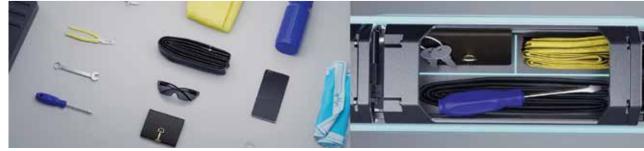


The AVS TTO7 HMI's single multi-function button allows riders to easily control power, lights, and assist mode levels.

teries can be utilized for a combined 720Wh capacity. Additionally, when not in use, the space for the second battery can store small items or charge phones, adding convenience.

Headquartered in Hong Kong under German management, AVS Electronics [Hall 8 / M26] has more than 15 years' experience in consulting, designing, and manufacturing of Light Elec-

The dual-battery system from Astro splits a 700-800Wh battery in half to reduce weight when not needed.



When not in use, the space from the second half-battery pack from Astro can be utilized to store tools and charge your phone.





bike

The multi-battery stacking mechanism from EMBS offers extra modularity.

tric Vehicles

(LEV), mobility and telematic

electronics. AVS Electronics' affiliate

AVE Mobility was established in 2014,

to develop, produce and market OEM/ ODM HMI solutions for the e-Mobility

Industry. At the show, the company

will present a series of new products starting from a new top-tube HMI,

AVS TT07 that features a multi-color

5-segment LED light bar that clearly

displays pertinent information. For

convenience, the TT07 HMI also

includes options such as BLE.

OTA firmware updates and NFC for Smartphone pairing

and bike unlock. The RC8-FS

integrates a smart capacitive

biometric fingerprint sensor

into the HMI's control panel.

access to startup activation

and the electronic lock to

operate the e-vehicle. Both

HMIs can be adapted to a wide

variety of drive systems and are

only allowing authorized riders

HMI, on the other hand,

sion announced last year is expected soon. This unit will boast an increased capacity of approximately 1,100Wh.

Based in Hsinchu, Taiwan, **Trend Power [Hall 8.0 / K24]** produces high-quality batteries on an automated line and benefits from a strong R&D foundation. Committed to sustainability they have signed the SBTi to support global environmental initiatives. At the show, Trend Power will introduce its latest in-frame battery series that features high-energy Li-ion cells and versatile multi-battery

fixation options for

company's latest HMI Display, using a TFT screen, provides a fully connected experience with continuous updates of new features through the e-bike software developed in-house. Also known for its expertise,

the company Yuntong Group/ Spard [Hall 8.0 / H07] develops and manufactures in its ISO9001 certified facilities in China high-quality

solutions for various industries, including battery packs and chargers. At the show, Spard will display four of their latest battery models: two 36V batter-

> ies (the YT30171 and the YT30208) as well as two new 48V

batteries (YT30374 and YT30296). All batteries feature Samsung cells.

Amidst the ongoing quest to enhance battery capacities, young Czech company Powerbox [Hall 8 / D42] specializes in e-bike charging facilities since 2020. With over 500 live charging locations across the Czech and Slovak Republics, they're a proud Eurobike partner, offering free stations at the central bike parking area for all e-bike riding show visitors. At their booth, they are showing e-bike charging stations using the new e-bike charging standard, mandatory for all EU electric bicvcle manufacturers starting from October 2025. The universal charging connector, designed for voltages up to 60V, is based on the Energybus consortium's 2009 design.

In the world of e-bikes, there's more to a smooth and enjoyable ride than just the batteries and chargers. Among these other components, torque sensors play a key role in ensuring a smooth ride. With a decade of experience Autorq [Hall 8.0 / I15] focuses on the development of advanced e-

sensors. providing unparalleled performance and reliability. Autorq's new hub motor torque sensor, hubTORQ, integrates directly within the hub motor instead of the bottom bracket, giving greater freedom in the design of an electric bicycle such as the specification of a gearbox in the BB area. On the other hand, the new ready-to-use compact torque sensor, kompakTORQ, has been specifically designed for mid-drive motors, in response to feedback from mid-drive motor manufacturers about the challenges of developing or sourcing torque sensors, The kompakTORQ brings the same levels of accuracy, precision, and reliability found in its bottom bracket torque sensors to mid-drive systems.

The YT30171 from Spard is a 36V 7Ah 252 Wh battery that's easy to carry.

Last but not least, Mahle Smart-Bike Systems [Open Air F12 / **G18]** continues to redefine the limits of e-bike technology. In addition to the latest X30 motor that's backward compatible with all X20 components, Mahle has brought to market a brand new Duo Remote, a sleek and minimalist all-in-one solution designed for flat handlebars. The two-button remote allows you to control assist levels, bike lights as well as the walk assist

mode. 📕 MW



AUTORQ's new hub motor torque sensor, hubTORQ, integrates directly within the hub motor.

Trend Power's new in-frame battery system offer a wide capacity range to suit various e-bike categories.

various e-bike frames. Compatible with different key driver units, it offers a wide capacity range suitable for diverse e-bike categories. Besides, with smart charging capabilities ensuring both performance and safety, it also supports range extender batteries for longer trips.

Sinbon [Hall 9.1 / C10], another Taiwanese company, claims to

strengthen the connection between riders and e-bikes with its new solutions being introduced at Eurobike this year. In addition to a new rear hub motor and a new tracking and alert system for e-bike security, Sinbon's Helios Battery solutions offer a fully customizable solution with various in-tube, in-frame, down tube and rear rack options to fit the mechanical design set by the frame. Sinbon uses Japanese and Korean battery cells for better efficiency and reliability. Also,

compatible with common communication protocols. Recently renamed company **EMBS** [Hall 8.0 / J18] (formerly Johnson Matthey Battery systems), is a European lithium-ion battery specialist, producing batteries in its own facilities in Poland. Introduced at Eurobike last year, the company's cutting-edge batteries are engineered to meet the rigorous performance demands of electric bikes. The S-tube 36V features a lightweight design with a convenient handle and slide-in mechanism while the B-tube 48V LFP battery has been designed from scratch in-house to combine technological excellence with high capacity and modularity with multibattery stacking mechanism. A 5.8Ah ver SINBON's Helios Battery solutions offer a high level of

customization.

OVERVIEW: NON-ELECTRIC UTILITY AND FOLDING BIKES

PEDAL-POWERED BIKES BRING FUN TO THE FOLD

Replace your car, avoid public transport, or simply make existing journeys easier. As the name suggests, utility bikes seek to make themselves as useful as possible. Similarly, folding bikes aim to bridge the gaps between other forms of transport, all while fitting into busy modern lives and occasionally cramped living spaces. Of course, electrification has reinvigorated both these segments. Yet there are still plenty of solely pedal-powered machines capable of maximising what you can achieve by bike. We took a look at some examples you can find at Eurobike.





Smart thinking and design combine with a solely pedal-powered option from Frankfurt-based Lax Cycles

Lax Cycles [8.0/B22] is a new Frankfurt-based brand launching at Eurobike and offering what it describes as multi-utility bikes with passion and attention to detail. Its machines are based around two 20-inch wheels with large-volume tyres to compensate for uneven surfaces. Their low centre of gravity and universal geometry promise to provide a stable ride, especially when carrying cargo via the optional rear rack or front carrier or with a child seat attached. Given the bike's neat, integrated, and modern design, pedalpower enthusiasts will be happy to find electrically assisted and conventionally propelled options. The firm is also keen to establish its sustainable credentials, with local production offering reduced carbon costs and recyclable materials chosen specifically for their ability to function within a closed loop.

Ellipse [9.0/E02] takes a similar approach. This French firm makes a trio of smart integrated bikes. Yet, the modernity of its designs doesn't prevent it from offering a pedal-powered option. The firm markets its non-electrically assisted M1.2 bike with the slogan 'modernised muscle'. Its base frame is configurable based on several types of transmissions covering derailleur and belt-driven hub gear options. It includes component choices, including flat or dropped bars to suit various applications from commuting to touring. It also



Ellipse's M1.2 bike doesn't require you to pick electrical assistance to access the most up-to-date features

features a full suite of smart features of the kind more readily associated with e-bikes. These include integrated lighting, a movement-based alarm system, and anti-theft tracking via a GPS. All of these are powered directly by a small but high-capacity in-built battery that provides two to four weeks of autonomy, or up to three months with the addition of an SP Connect power bank.

Bastille's [12.0/C13] bike results from several years of R&D, multiple patents, and the imagination of designer Gilles Henry, the creator of the popular Yoyo folding baby stroller. The machine he's created folds in on itself in under ten seconds with a flick of the wrist. Yet, once assembled, it offers a full-sized ride and rolls on 27.5-inch wheels. The key to this ability is a unique folding mechanism that flips one lever on the down tube and one on the handlebar stem. The down tube folds inward via a central hinge before the handlebars are pulled out and moved to the side. The seat post then extends and folds back, the pedals fold in, and the seat and chain stays fold inward, bringing the rear wheel with them. Once folded, the Bastille forms an 82x37x91cm package with the wheels side by side, allowing it to be rolled by hand. It has an aluminium frame, carbon fork, belt-drive transmission, three or seven-speed hub, hydraulic disc brakes, and integrated lighting. Total weight is 15kg.



Quick folding and full-sized wheels characterise this bike from Bastille

Vello [12.0/B12] also makes a broad range of folding bikes based on its proven 20-inch wheel chassis. They include racing and gravel-style editions, plus models with steel and titanium frames. The Shimano hub gear equipped Vello Alfine is among the best-selling and most practical. This city-focused commuter has a Shimano Alfine 8 or 11 internal gear hub offering a wide range of ratios. Its low maintenance construction includes a smooth-running belt drive from Gates along with hydraulic disc brakes. Practicality is boosted by the ability to fit the firm's high-capacity front parcel shelf and a range of other accessories, including mudguards. Chunky Schwalbe Marathon Original tyres offer smooth running on or off the tarmac, while the bike's ergonomic ride position and high-end finishing kit make it equally at home on longer leisure rides

The **Mikalon [8.0/C09]** project started in 2018, aiming to create a structure with structural qualities that architect Il Hoon Roh has researched for over a decade. The resulting bike uses a hybrid folding/separable design that allows the bike to fold in seconds while retaining the frame's structural benefits. Its patented retractable stem also speeds up this process. It automatically returns to the user's height setting on reassembly, while a unique cable separation device allows the brake



Mikalon's folder employs high-grade titanium construction and over a decade of structural research



Singapore's The Urban Bike is a custom builder with some unique space saving and folding designs

cable to be separated and reconnected in seconds. With a titanium frame, the bike uses 20-inch wheels and is offered with 12 or 24-speed wireless gearing and disc brakes. Carbon components then contribute to a bike weighing under 8kg. The firm is now making a first edition of 50 bikes, all of which will be manufactured in-house using an argon chamber, a technique typically reserved for the aerospace industry, resulting in a frame passing the ISO 4210 safety test.

The Urban Bike [9.0/F02] is a Singaporean builder specialising in designing and assembling custom titanium bicycles with carbon belt drive systems. It uses seamless Grade 9 titanium tubing across its designs, which include multiple folding and break-away style options. Parts options include Shimano Alfine 11-speed hub gearing and Tannus puncture-free airless tyres. Key models include the 9.7kg 20-inch wheeled Titanium Folding bike, which includes mudguards and a front luggage mount. The firm's Titanium Urban bike is a full-sized, 8.14kg bike that includes a slim mode for parking thanks to its independently turnable handlebar and detachable pedals. At Eurobike, the firm hopes to attract more international dealers.

Japanese firm **5LINKS** [9.0/B20b] makes a pair of interesting bikes, the 2.5 folding bike and the collapsible Musashi/R. The first is a diminutive folder with a unique mechanism and narrow folded package. It uses 16-inch wheels and is available in various build options to suit different uses. The firm also supplies a range of carry matching bags, allowing the 2.5 to be easily transported over your shoulder when not in use. By comparison, the firm's Musashi/R is a vastly different proposition. This 700c wheeled bike provides full-sized ride characteristics yet can be quickly broken down for transport. This is achieved via a series of pivot points, allowing the bicycle's rear triangle to fold into the main frame. These are complemented by a unique hub system that allows the cassette and drivetrain to remain in position even after removing the wheels.





Japanese firm 5LINKS make both a diminutive folder and a full-sized bike that can be deconstructed for travel

UK-based **Brompton** [12.0/B28] is again exhibiting at Eurobike. It recently launched an update to its popular folder in the form of a new rim made entirely of recycled materials. Brompton has also scheduled a mysterious event in Frankfurt the day before this year's show. Is it going to be the launch of a bike with bigger wheels (my prediction) or just some new tweaks to its existing line? I guess we'll all have found out by the time you're reading this.

The **Hase Bikes [8.0/E14]** line-up ranges from off-road trikes to semi-recumbent tandems. Its Gravit Dust is a cargo bike and gravel bike in one, which may initially sound crazy, but could prove the perfect combination for anyone who not only enjoys riding on asphalt but also wants to ride and transport things off-road. It weighs just 20kg, is easy to ride or carry, and



Hase Bikes Gravit Dust is the cargo bike you didn't know you needed but now definitely



Brompton moves closer to its goal of manufacturing a net-zero bike by 2050

becomes ultra-compact when the movable parts of the telescoping frame are pushed together. Not only will this keep it out of the way at home, but means it can fit on any standard rear-mounted car rack. Applied to the wild, it benefits from an enormous cargo-carrying surface and ten



Practical haulage bikes from Milan-based Bicicapace

heavy-duty mounts for your luggage. The bike's total load-carrying capacity is 200kg, while a suspension fork, fat tyres, ultra-wide off-road gearing and confidence-inspiring brakes smooth your way on rough terrain.

Milan-based Bicicapace [8.0/ **B15]** continues to offer many practical muscle-powered haulage bikes. These include the Pelican, a front-loading cargo model with a very large front panel that allows extra-large volumes and additional weight to be carried on the front. The bike's mixed-size wheels then support this, with the smaller front hoop providing extra strength and manoeuvrability while keeping the bike's centre of gravity low even when loaded. The result is a bike that can carry 65kg on the front, accepts up to two child seats, and has a total load limit of 190kg. The firm's Classic model uses much of the same thinking but on a smaller scale. This single-size bike again mixes wheels in pursuit of a confident and stable ride. One of two front-loading options is included in the price. These are a bolt-on 25 kg capable shelf-style rack or an 80-lite volume PVC fabric lid-top box capable of carrying 15kg of cargo.

Both Azor and Bakfiets.NL [8.0/B17] now offer electrical assistance



Azor's practical aluminium Workman model comes with multiple luggage carrying options

across their utility bikes. However, riders are still free to choose the lighter and more economical option of relying on pedal power alone. Azor makes a broad range of bikes, with the Aluminium Workman offering particular utility on account of its ability to be built with front and rear carriers. along with a huge range of other options, including integrated dynamo lighting and a twin leg kickstand. Similarly Bakfiets.NL offers a wide range of specialist and general cargo bikes, with the firm's family-friendly Cargo Bike and Cargo Trike ranges still available in pedal-only versions.



Bakfiets.NL still offers pedal-only versions of its family-friendly Cargo Bike and Cargo Trike ranges

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BEMOOV BIKES

R24 ROAD AND GRAVEL BIKE

Belgian brand Bemoov Bikes offers a wide range of high-end kids' bikes. It now features a dedicated Road/ Gravel model with 24-inch wheels. Its lightweight aluminium frame, quality drop-bar shifters, and single-ring drivetrain give little riders a great introduction to athletic riding. The complete bike weighs just 8.35kg and is available in two unique colours.

EUROFENDER

EUROFENDER SQUARE

Square-shaped mudguards are proving increasingly popular. Eurofender offers several styles, including the Tempo and Duo Square models. They've gained favour due to their lightweight and flexible yet robust construction and a distinctive aesthetic that blends well with modern e-bikes. Their angular shape effectively protects from road spray while adding contemporary style to any bike, making them popular among casual riders and design-conscious cyclists. 9.2 /



BENNO BIKES REMIDEMI XL

The RemiDemi XL has extended cargo capability, so you can take on even bigger everyday adventures and bring two passengers along for the ride with child seats or Benno passenger accessories. It's designed to be a compact powerhouse that punches above its weight with a max gross load of 190kg, a multifunction XL rear rack, and a hard-working Bosch mid-drive electric motor, 12.0 / A19

NEW PRODUCTS

TUBEPACK BATTERY WITH **CLICTAKE** LOCKING **MECHANISM**

Clictake is an innovative secondary battery lock that is easy to handle. Intube batteries, often removed from below or the side, typically require two hands to prevent dropping. With Clictake, they can be removed with one hand. The battery falls into an integrated secondary lock upon unlocking, keeping it secure. Applying gentle pressure releases the battery for easy removal. 12.0



ACER **PREDATOR EXTREME E-SCOOTER**

The Predator Extreme E-scooter represents another category in Acer's smart mobility range. It features an offroad-inspired design with a telescopic front suspension fork, rear shock absorber, and a low centre of gravity for added stability. Its 350W (peak 960W) motor reaches speeds up to 25 km/h, while 40 Nm torque conquers inclines up to 18%, giving riders the freedom to explore various terrains. 9.0 / B06

BETO SP-009AG SHOCK **PUMP**

The Beto SP-009AG Alloy Shock Pump features a 14mm alloy barrel and a patented pinch-free T handle for convenient use and storage. Its digital gauge displays PSI, BAR, kg/cm, and Kpa. Its 150mm swivel hose ensures easy access and unrestricted airflow. The pump includes a two-stage non-leakage head with a hose, thread-on valve engagement, and a pressure bleeder button for fine-tuning.



CYCPLUS

T3 HIGH-**POWER SMART BIKE TRAINER**

A motor-driven direct drive trainer, smart trainer. The T3 High-Power Smart Bike Trainer features a 240mm permanent magnet synchronous motor, delivering 2,800 Watts maximum power and 27% gradient simulation. It ensures precise balance detection, maintains ±1% power accuracy without calibration, and can operate unplugged. Its compact shape and carry handle make it easy to transport and store. Compatible with Zwift and TrainerRoad. 11.1 / A34

INNOVA TIRE

TPU TUBE

Thermoplastic polyurethane (TPU) inner tubes are lighter, more compact, and better at retaining air. They're also better for the planet and are 100% recyclable. Inner tube specialist Innova offers them in multiple sizes for road, gravel, MTB, BMX, and fat bikes. Available on a retail and OEM basis. 9.1 / A37





JULONG MACHINERY ZERAY ZP-D269 PEDALS



A modern flat pedal with a broad platform, low profile, and aggressive retention. The ZP-D269 pedals feature an aluminium body construction that can be customised with a colourful anodised finish. Nine replaceable pins on each side ensure grip in all weather conditions. Fitting is via the reverse of the axle using an 8mm Allen key. 9.1 / BO8

MARIN MOUNTAIN **BIKES**

ALPINE TRAIL XR AXS

Marin introduces its most advanced line of Alpine Trail models to date, featuring highly adjustable frames that aim to compete with the best enduro bikes available. All models use Series 4 aluminium MultiTrac 2 LT frames with mixed wheel sizes, 160mm rear travel, adjustable geometry (headtube angle, bottom bracket/chainstay length), and downtube storage. The lineup includes three models and a frame kit, with the XR AXS as the premium option. 11.0 / A07







NECO SEMI-INTEGRATED **CABLE** ROUTING **HEADSET**

This headset helps bike makers integrate brake and transmission cables neatly and without restricting handlebar rotation. The design of the 35-degree opening on the top cover makes the introduction of both sets of cables as smooth as possible. The cover itself is made from nylon fibre, which reduces friction and ensures the cables aren't scratched. 8.0 / K26

ULTRA COOL TECH **COOL VEST**

Leading cycling teams have tested the Ultra Cool Tech cooling vest to improve pre-and post-race cooling. Its advanced technical materials deliver evaporative cooling by adding water.

Optionally, natural clay cool packs can be used. Its innovative design ensures convenience and maximum adjustability to fit athletes with different body types comfortably and provide superior cooling. Simultaneously, its hood keeps the sun off your head. 11.1 / B37

VELLO

bags, and accessories, including mudguards. It aims to be perfect

for longer tours and promises to be

an ideal choice for versatile cycling

experiences, 12.0 / B1



NEW PRODUCT



VREDESTEIN **AVENTURA GREZZO TYRE**

A burly gravel tyre for when your gravel rides get seriously rough. The new Vredestein Aventura Grezzo is designed for tougher trails and more muddy conditions. Its tread pattern is more extreme and aims to give you grip and confidence during your ride. It's available in all-black and tan wall versions in 700x44mm and 650bx50mm sizes. 11.1 / A08



AEROZINE XEON MINI CRANKSETS

These Xeon mini cranksets are specifically designed for kids' bikes. Thanks to their forged aluminium construction, each is durable and corrosion-resistant. Their unique design maximises strength and stiffness while minimising weight, and they feature a narrow Q-factor for a better fit for kids compared to standard mountain bike cranksets. Available in lengths from 120mm to 155mm, these cranksets ensure the best fit for young riders and come in various anodised colours, including black, red, blue, and gold. 9.1 / E42

CH1-R **CARBON** INTEGRATED **ROAD HB**

With a high-quality carbon fibre construction, the CH1-R features a combination of lightness and stiffness, ensuring optimal road performance. Designed to fit modern road bikes, the unit offers an integrated cable management solution, providing a clean and streamlined look. The CH1-R's optimised ergonomics ensure a comfortable and efficient riding position, allowing the rider to maintain an aerodynamic posture during long riding sessions



MING LUN SPORTS DHR1S5 REAR HUB

A versatile rear boost hub for mountain bikes based around the popular 12mm through axle and 148mm OLD fitting. The DHR1S5 rear hub benefits from an interchangeable freehub body, with options covering SRAM's XD drive and Shimano's Microspline system. Inside, you'll find a five-pawl ratchet system and a complement of six sealed bearings. Also available in an uprated version for e-MTBs with a more robust chromoly axle and freehub.





VP's new lock-on grips are manufactured from recycled polypropylene and thermoplastic rubber. This means they're as easy on your hands as on the environment. Their profile mixes smooth and textured surfaces for comfort and all-weather traction. They measure 118mm long, with a 28mm outer diameter and a 22.2mm inner. Each set is made in Taiwan and is available in multiple colours. 9.2 / C10



FEEDBACK SPORTS REFLEX

FIXED TORQUE BIT DRIVER

Compact and clever, the Reflex Fixed Torque Bit Driver is essential for safe mid-ride repairs. It features a hollow, ergonomic T-style handle with internal storage for a 5Nm preset torque bit and four S2 steel driver bits. This non-ratcheting driver is simple and sleek, with four bits suited for common bike applications and a standard 1/4"-sized driver for cross-compatibility. It aims to offer a perfect balance of affordability, elegant function, and compact size. 11.0 / B14







SCARP MT EXONIC

The Scarp frame led KTM to the World Cup podium. Launched in 2020, the Scarp MT expanded KTM's MTB range, blending increased travel with an ultralight race frame. Featuring the firm's Straight-Line-Link (SLL) technology to provide 120mm travel front and back, it ensures peak performance over long distances and rough terrain. This version benefits from a Fox 34SC Float Factory fork and SRAM XX SL Eagle 12-speed transmission. 11.0 / C18

NEW PRODUCTS

BOSCH

NEW DIGITAL SOLUTIONS FOR MANUFACTURERS

With the smart system and the associated eBike Flow app, Bosch eBike Systems is merging the physical and digital eBike experience for end customers. Now, eBike makers have additional options to further expand their digital offering and thus address their customers even more individually with a



customised variant of the eBike Flow app on the one hand, and with useful tools for manufacturers who offer their customers their own apps on the other. Bosch eBike Systems also offers further interfaces, enabling digital services and offerings from third-party providers to be seamlessly integrated into the brand ecosystem. Hall 12.0 / A21 F12 / J42



TERN BICYCLES STOW DECKS

Foldable side decks that offer versatile support for your cargo and passengers, from securing half-full panniers to offering a comfortable footrest for your co-adventurer. Their five-angle locking system helps you compress panniers that are not fully loaded and quickly fold up and out of the way when not in use. The Stow Decks can carry up to 35 kg per side and are compatible with Tern's Cargo Hold Panniers and the Orox and Quick Haul Long ebikes. 12.0

HARO BIKES RIVETTE ROAD BIKE

A design that aims to provide everything you might want from a road

bike. The Rivette is a race-ready all-arounder crafted from high-pitch carbon fibre to balance stiffness and lightness. The result is a raw frame

weighing just 750g (size 56cm). Its stiff headtube ensures precise steering, while aero tube shapes and internal cable routing minimise drag. Available in six sizes, two colours, and three spec levels. F12.0 / G04



URTOPIA CARBON 1 PRO BIKE

The Carbon 1 Pro is a high-performance gravel e-bike with a lightweight carbon fibre frame, perfect for city commuting and off-road adventures. It excels in hill climbing and aims to pair quality and value with class-leading style. Smart features include a movement alarm, GPS tracking and fence, fingerprint unlock, navigation without a cellphone, data tracking, voice control, Bluetooth music, and more. 8.0 / E16



SKS GERMANY SPEEDROCKER XL MUDGUARDS

The Speedrocker XL mudguard set, made from impact-resistant high-performance plastic, now fits tyre widths up to 52mm. Designed for gravel, cyclocross, and road bikes with disc brakes, it features a dual spoiler function on the front mudguard, secured with rubberised hook-and-loop fasteners. The rear mudguard provides excellent splash protection with its telescopic extension profile and sturdy rubber straps. The flexible flap fastening system can be mounted on any frame geometry. 12.1 / A18





GOFLUO COLETTE HANDLEBAR BAG

A reflective handlebar bag to keep you visible during and after your commute. On the back, you'll find multiple attachment loops. Once all the straps are adapted to your bike, you can quickly attach and detach the bag thanks to its magic sliders. When your commute is over, you can easily adapt the reflective adjustable shoulder strap and bring the bag with you. All belongings are secured thanks to the bag's waterproof fabric, zipper, and taped seams. 11.1 / D14

KT TAIWAN

QL-MHDF E-BIKE FRONT HUB

This high-durability front hub is designed specifically for heavy-duty applications, including use on e-bikes and e-cargo vehicles. It comes equipped with two sealed bearings and a robust steel axle, ensuring exceptional longevity and performance under high torque. Its simple six-bolt rotor fixing and nutted axle ensure easy servicing and



SCADA

HAKA DROPPER POST

The Haka dropper post aims to be lightweight and durable. It features a one-piece forged inner tube and clamp for exceptional strength and minimal stack height. Its unique oil/air cartridge ensures smooth, easy adjustments, while the rotatable actuator mount enhances cable routing for responsive remote control. With a 215mm travel option, it's well suited to taller riders. It is compatible with seat tubes from 27.2mm to 34.9mm, with the smaller diameter being ideal for gravel bikes. 9.1 / B16



SEATYLOCK VIKING CHAIN LOCK

The Viking chain lock is unlike any other chain lock on the market. Its unique design ensures a noise-free ride, while its patented magnetic fixation mechanism allows partial locking for a smooth user experience. A neoprene sleeve and protective silicon shell then combine to provide water-resistant performance, ensuring reliable security regardless of the conditions. Available in various lengths and security ratings. 11.1 / D11

July 05, 2024



ELECTRONICS RB SERIES

Remote pods for triggering assistance mode level selection, electronic shifting, physical switches, drive systems and other applications. The RB Series has been developed for gravel, road and triathlon bikes. Three different modular designs can be mounted on almost any handlebar. They're compatible with various drive systems, displays, electronic shifting, and control units using interface options including CAN, I2C, SPI, UART and physical loop. 8.0 / M26

SWITCH PODS



ASS MAGIC SKIN REPAIR CREAM

Rider repair for incidences of chaffing, blisters, or sunburn. Designed to rejuvenate damaged skin, Ass Magic's Skin Repair Cream accelerates the healing process. Its active ingredients, panthenol and glycerine, are powerful humectants, locking in moisture to aid skin repair. Colloidal oat is known for its anti-inflammatory properties and provides relief from discomfort while soothing irritated skin. Comes in a 120ml tub. **8.0** / **B50**

VELO

VLT-5124 PU BAR TAPE

Velo's newest PU tape is tailored for regular bike enthusiasts. Designed for easy maintenance and cleaning, this bar tape offers a firmer feel to enhance riders' road awareness. Its specially designed pattern provides anti-slip functionality, while the matte finish adds a sleek touch to the bike's appearance. Available in various thickness options to accommodate different hand sizes, VLT-5124 aims

to ensure a personalised and comfortable grip for every rider.



NEW PRODUCTS

FULCHEE SFA AXLE

This lightweight through-axle has a weight-saving hollow centre that hides a utility-boosting tool inside. The SFA Tool lever is designed to be hidden away within the axle. It can be removed without tools to function as a 6mm hex and provide leverage for tightening the axle itself. Users can also select an additional 5, 4, or 3mm hex or T25 torq for use elsewhere

on the bike. 11

V-GRIP

ROTATES SPRAY ME CAP

Stay hydrated while keeping cool with the Rotates Spray Me Cap. This innovative design offers two modes: a high-flow stream for drinking and a refreshing shower spray for your head and body. Easily switch between modes with a simple pull, allowing you to keep one hand on the bar for safety. The cap can be disassembled for effortless cleaning, and the bottle is dishwasher-safe and recyclable.

9.1 / GO2

ALEX RIMS

EMP5 EBIKE-SPECIFIC WHEELS

Wheels to handle the robust torque of eMTB drivetrains. The rear hub features five sealed cartridge bearings to withstand the demands of powerful eMTB motors and includes an innovative ratchet ring drive system for swift and reliable engagement under high torque. The front hub then features a large diameter shell to minimise deflection. Wide 30mm inner profile rims complement both to accommodate aggressive tread tyres, with the complete set weighing in at 2,089 grams. 9.1 / C09





ZF MICRO MOBILITY BATTERIES

The ZF Bike Eco System offers two batteries, in 504 and 756 Wh capacities, to meet the bike manufacturer's requirements. The batteries are built with the latest cell technology and integrated into a 48-volt system. The sockets on the battery terminal allow short distances and easy connection of components in the back. 12.1 / A09



ALHONGA 534 SERIES BRAKE

A premium disc brake with a secure safety lock to prevent parking function failure. Most cargo bike parking brakes are controlled with a single lever, making it easy to disengage them by accident. The Alhonga 534 series' parking function activates with one button but requires a second safety lock to be selected before releasing. Other functions include powerful two and four-piston combos suited to heavier bikes, aluminium construction and user-friendly mineral oil bleeding. 9.1 / A



HUBTORQ MOTOR TORQUE SENSOR

The HubTorq hub motor torque sensor seamlessly integrates within the hub motor itself. This design brings the accuracy, precision, and reliability of the Autorq system and applies it to the hub motor rather than the bottom bracket. This integration offers greater flexibility in electric bicycle design, allowing for the inclusion of a gearbox in the bottom bracket area and the specification of high-end chainsets.





YAMAHA **PW SERIES S2 MOTOR**

Developed with the philosophy that less is more, the PW series S2 is Yamaha's smallest, lightest and most powerful drive unit for the high-volume Sport and Trail sectors. Yamaha's engineers have worked tirelessly to make the PW series S2 one of its class's most powerful and lightest drive units. The result is a motor that can produce 75Nm of instant torque yet weighs only 2.85kg, leaving it with one of the best torque-to-weight ratios in its class. 8.0 / GO4

WELLGO

ECO FRIENDLY MATERIALS

As a manufacturer, we've been working for many years to reduce our carbon footprint. We have reduced our material usage by around 25% over the years by updating all our product designs and inventing new structures for the pedals. After much testing, we are able to add natural plant-based materials such as bamboo, coffee grounds, and timber into our plastic pedals, to reduce plastic use even more. The pedals remain as strong as ever despite the addition of eco-friendly materials. Hall 12.1 / C22





BAFANG M210 EBIKE **DRIVE SYSTEM**

The M210 eBike drive system's optimised structure and cutting-edge control technology are designed to excel in all kinds of urban riding. It goes beyond understanding the road conditions to anticipate riders' intentions and always deliver the right support. This 3.2kg system is capable of producing 75N.m of torque and pairs seamlessly with Bafang's GVT 3-speed gear hub. 8.0 / J16



GPSTUNER V2X **TECHNOLOGY**

GPSTuner aims to transform road safety with its innovative V2X technology. Developed in collaboration with Commsignia, this system enables real-time communication between vehicles, infrastructure, and personal devices, providing instant alerts and safety warnings for cyclists and scooter riders. It aims to facilitate safer, smarter travel while reducing accidents and ensuring secure journeys for vulnerable road users. 8.0 / 112

HAFNY

HF-1500 WIDE PLATFORM PEDAL

Rider comfort is the top priority for these lightweight pedals. At only 348g, they nevertheless offer a broad and flat 105x105mm stepping area. Additionally, it features highquality axles and bearings, along with replaceable screws, allowing riders to exert force more effectively and ride



NEW PRODUCTS







ARMOR

E-BIKE MODULAR PROGRAM

Armor has over 50 years in bicycle manufacturing, exporting to 70+ countries from Taiwan, China, Vietnam, and Cambodia. Build your e-Bike with ease using our modular kit, just like assembling Lego. Our system of tubes, motor hangers, and battery cages shortens production time and cuts costs. You dream it, we build it.

RIESE & **MÜLLER** CARRIE

The Carrie is Riese & Müller's new entry-level cargo bike model. It promises to be as economical as it is compact, modular, and versatile. With the cargo box closed, the Carrie is extremely slim and easy to park anywhere. Its innovative Flex Box provides generous storage space for the weekly shop or up to two children. It's made in Germany, with Riese & Müller able to use 81% ASI-certified recycled aluminium for the frame, 12.0 /



JETSET

AM-30 DH+ RIM

Jetset's versatile new AM-30 DH+ rims are engineered with the firm's patented Arcos System design and multi-angle nipple beds to deliver unmatched performance. The latter helps match the nipple angle while spreading the load placed by the spoke on the rim for greater durability. They're available in 29-inch (620g) and 27.5-inch (585g) versions and come with a choice of a sleeved or welded rim construction. 9.1

ROECKL **SPORTS**

ITON 2 **GLOVES**

These gloves promise a balance of comfort and functionality. Crafted with a breathable Vita Elastic backhand made from Econyl regenerated nylon and airy micro-mesh, this ensures comfort during long rides. Their Bi-Fusion damping technology offers enhanced padding and ergonomics, while Comfort-Innovation padding on the thumb provides

extra protection. The highly breathable Roeck-Grip palm guarantees flexibility and grip. Convenient features include a soft-wipe thumb and an easy-to-remove pull-off system. 11.1 / CO9



TRIPEAK

3-IN-1 CORE SYSTEM

Tripeak's innovative 3-in-1 Core System for bottom brackets is compatible with 90% of crank brands, including Sram, Shimano, and Rotor. It allows you to easily swap between cranks without replacing the bottom bracket and simplifies stock holding for workshops. This design is featured across the Jetstream Pro Ceramic bottom bracket series and Tripeak's ceramic and steel bearing options. 11.1 / D20





DAHON CIAO 13

With lightweight construction, high-performance features, and a low step-through frame, Ciao series is a true marvel that caters to riders of all ages, integrating Dahon's patented folding technology. The dynamo hub provides you the freedom of continuous, reliable power, which powers your lights effortlessly while you pedal. Hall 9.0 / F06

SAMOX

E1 CRANKARM

Samox has collaborated with Gates, a leader in belt drive technology, to introduce its Silver E1 crankarm, drive ring, and chainguard system. The Samox Silver E1 is forged from a 6-series alloy for low weight and high durability. It's available in sizes from 150 to 175mm. Options are available for the most popular motors with a BCD 80 spider, alloy ring, and chainguard. 12



SP CONNECT PHONE CASE **XTREME**

SP Connect's Phone Case Xtreme is designed to provide unparalleled smartphone protection. Combining the features of SP's Phone Case with Secure Mounting, Wireless Charging, and strong Magnetic Attachment, it now boasts a full 360° enclosure and military drop-test certification. With waterproof, mud, and dust-resistant capabilities, it's the ideal solution for extreme adventurers seeking highgrade smartphone protection.





July 05, 2024

G 50

SECURE-LINK

The Secure-Link is a dependable chain connector that provides a smooth riding experience. Its innovative design minimises the risk of accidental disconnection, offering peace of mind during rides. It's easy to fit without tools and includes a sturdy locking mechanism that ensures unmatched chain security, allowing you to ride confidently and push your limits without concerns. 9.1 / E43









BY,SCHULZ VALVE ADAPTER V.5

The aluminum V.5 is a two-part combination tool that enables conversion from French SV and Dunlop DV valves to Auto AV valves. This makes it easy to inflate bicycle inner tubes at service stations. The built-in O-ring serves as a seal and protection against loss. The integrated socket wrenches are for loosening and tightening AV or SV valves as well as extending SV valves with pipes. Available in black, red and gold, the by,schulz valve adapter V.5 is designed to attach to your key ring - a problem solver when you're on the move. Hall 12.1 / C28



THUN LIMBO

Limbo is Thun's new BB set for children's bikes certified as per ISO 4210 (city-trekking standard) featuring an extra-short spindle to ensure the smallest possible Q Factor. Currently, there is no city-trekking-certified BB set in Thun's programme with a spindle that short and a price point that attractive. Limbo is available with a blackened steel spindle, threaded composite cups with shoulders (2S), and for 68 mm BB housings. Hall 12.1 / D33



U-POWER MC-51 AND MC-52 MULTITOOLS

The MC-51 and MC-52 multitools are crafted with cold forging and CNC machining techniques. Notably, their flat and smooth surfaces post-assembly are distinctive. Despite the slim side plates, they offer ample strength for consumer needs. Lightweight, compact, and portable, these multitools are practical for various tasks. Specifically, the MC-52 includes a chain tool compatible with 6 to 13-speed chains. 9.2 / C24a

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EDA ELEMENTI **GERA ALLROAD** Gera Allroad is a superlight fork ideal for allroad use. The design facilitates the integration of cables inside the frame, thanks to its D-shape fork steerer and the DCR system. Compatible with most bicycle frames on the market, whether they are made of carbon or metal. Its full carbon construction, coupled with an integrated 45° crown race, ensures both strength and

mance. It is designed to accommodate dynamo hubs, such as the SON®, allowing for optimal integration of electric cables inside the fork.

lightweight perfor-

B45 / 11.1



BESV TRX-B SUV 1.0

Traverse all terrains with an SUV e-bike that blends the best of trail and city features. The TRX-B SUV 1.0 has a beautiful hardtail alloy frame as well as the fender protection and carrier convenience of the city and trekking models. With a Bosch Performance CX motor (85nm torque), a 750Wh Bosch slider battery, 120mm front suspension, and 4-piston SHIMANO brakes, this bike offers distance with assistance, smooth rides, and precision braking in any conditions. 12.0 | B11

LUMI SWIVELLING

VERTICAL BIKE WALL RACK

This bike storage rack offers a space-saving solution for keeping bicycles organised. Its foldable design makes it easy to store when not in use. It features a three-level length adjustment and is suitable for bikes of various sizes. Loading and pulling out the bike is a breeze, making it the ideal choice for effortless and efficient bike storage. 9.1

SUZHOU I-BIKE TECH FRONT MOTOR

This simple front hub e-bike motor can be branded with your logo as needed. It's offered to fit a range of front fork spacings, including 75, 83, 89 and 100mm. Its lightweight construction is based around an aluminium hub shell, while its fixing is achieved via a robust and secure slotted and nutted axle. It arrives at a competitive price and has a three-year warranty. 9.0 / F31



SHENZHEN OMNI INTELLIGENT TECHNOLOGY M151 LOT

M151 IOT MODULE

An intelligent anti-theft solution for e-bikes that gives access to smart features like live location via GPS, movement alerts, navigation, ride and vehicle data, and the ability to control the bike's settings remotely.

The M151's IoT capability can easily integrate with e-bike controllers or drivers. This connectivity solution includes an IoT module and an application for riders, who can quickly and conveniently access all information via the app. 8.0

ANANDA R900

The R900 is the world's first electric motor with an electrically controlled 3-speed integrated gear system. Gears shift automatically, eliminating the need for manual shifting. This results in a cleaner design, more robust transmission, and an enhanced riding experience that improves both enjoyment and safety. Discover the R900 in Hall 8.0, Booth I14 and experience it





TRIPEAK 3 IN 1 CORE SYSTEM

TRIPEAK's latest invention is a 3-in-1 core system for bottom bracket that matches 90% of all cranks, covering SRAM, Shimano and Rotor. Easily switch between different cranks without the need to change the Bottom Bracket. This design is not only used in the Jetstream Pro Ceramic BB series, but also in TRIPEAK standard ceramic bearings BB and steel bearings BB.



ZCG08-120 ALARM CHAIN LOCK

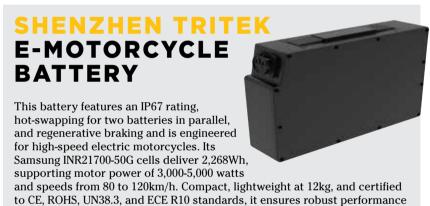
This 8mm hardened steel chain lock features a built-in alarm which works in conjunction with a motion sensor to warn off thieves if they interfere with your bike. Its electronic parts are IP67 waterproof, allowing the lock to be repeatedly left outside in all weather. It's part of the firm's popular Noisy Cat range. 9.1 / G09

NEW PRODUCTS



JIN XIN YU POWER 54.6V 2A CHARGER

Jin Xin Yu Power's 54.6V 2A battery charger is designed to charge electric scooters, bikes, and skateboards efficiently, ensuring quick recharging to keep your vehicles fully powered for uninterrupted journeys. It's ideal for urban adventurers and eco-conscious commuters seeking a reliable solution to stay connected, charged, and committed to sustainable travel practices. 9.1 / G24



HK GACIRON RAPTOR 3000 / 1800 HEADLIGHTS

and safety. 8.0 / N

The Raptor 3000 / 1800 anti-glare bicycle headlight features a cut-off beam optical pattern and includes a 10000mAh or 6700mAh battery with a maximum working time of 50/35 hours. Both have an input and output of 5V/2.0A, a beam distance of over 200 metres and are IPX6 waterproof. The headlights weigh just 290g and are C-C rechargeable. They can be installed above or below the handlebar, function as a power bank, and support wireless remote control. 9.1 / B22



NANCHANG LVBU

LVBU KH52S POWERFUL E-BIKE KIT

Upgrade your bike with the LVBU KH52S e-bike kit, which features a powerful 48V 500W motor and a large capacity battery to provide smart assistance for up to 150 km range. It includes road slope detection and anti-theft GPS tracking. Control via app or Bluetooth display and monitor real-time ride data. The kit is designed for an easy and efficient e-bike transformation with a minimum of mechanical intervention. 8.0 / O15

TIANJIN DONGYA CHAIN D SERIES BICYCLE CHAIN

The lightweight design of Tianjin Dongya D Series bicycle chains is partly due to the combination of hollow pins and plates. These save weight in areas of reduced load without compromising wear capacity. Each product in the series promises smooth shifting and can be specified in multiple colour options including this striking iridescent one.



JIASHAN SHENGGUANG ELECTRONICS

JY-6272 REAR LIGHT

Jiashan Shengguang Electronics' JY-6272E rear e-bike light features brake light functionality and an integrated Z-reflector. Its slim, wing-inspired design offers 240-degree visibility, complemented by an optic lens for enhanced clarity. The light universally fits 50mm or 80mm carrier distances, ensuring safety with style and is designed to complement

the firm's wide range of e-bike-specific front headlamps.

9.1 / D24



SHANGHAI LUM BRAND MANAGEMENT V1 BIKE

The V1 bike features a sleek, intuitive design for off-road riding. It has a speed bolt-shaped frame and an extra-long saddle for comfort. The space behind the saddle allows for cargo or safety accessories.

These design elements aim to enhance the user experience, offering greater convenience and functionality while distinguishing it from





ZHEJIANG **FUNDRIVE TECHNOLOGY**

PLASTIC GEARS

Zhejiang Fundrive Technology is a specialist in the production of plastic gear parts. It offers solutions featuring small modulus and high precision. Its extensive expertise and production equipment allow it to apply a broad spectrum of processing technology to each project. The results promise high strength, long life, and low-noise operation. 9.2/

TIANJIN DONGYA CHAIN

DLC SERIES BICYCLE CHAIN

Tianjin Dongya Chain's DLC Series bicycle chains suit mid- to high-end bicycles and feature the firm's striking anti-rust treatment. Their pins and rollers are designed to be wear-resistant, while surface treatments and pre-lubing aim to provide stable performance in a range of conditions. They are available in various finishes, including this striking black and yellow colourway. 9.1



TIANJIN WANDA TYRE

HIPPOGRIFF ENERGY-SAVING E-CITY BIKE **TYRE**

The Hippogriff is designed for multiple riding conditions and features all-season performance. It aims to provide a smooth ride that delivers a good balance of comfort and traction. As an all-season tyre for city bikes, it majors in crossover capability on dry and wet and paved or backcountry roads. Its energy-saving technology helps electrically powered bikes extend their endurance range.

This technology has significantly reduced rolling resistance compared to the original spec.

NEW PRODUCTS

ZOVII ZNU14-230 **ALARM U** LOCK

This U-lock includes a 120dB antitheft security alarm with manual arm and disarm functions. Its 14mm carbide-reinforced steel shackle provides robust protection against bolt cutters. Powered by a CR2 lithium battery lasting eight months to a year

it's compact at nine inches long and

2.6 pounds. The IP67 waterproof rating and vinyl coating ensure durability and corrosion resistance. Ideal for ebikes, bicycles, motorcycles, and retail storefront doors. ® ZOVII

SHANGHAI LUM BRAND MANAGEMENT

RVS1 BIKE

This motorcycle-inspired electric bike features a tank-shaped battery and a broad front headlamp for a unique look. Its innovative design enhances aesthetics and individuality, combining electric bike efficiency and motorcycle boldness. Its stylish appearance aims to appeal beyond the traditional cycling market and make a statement on the road. F11 / B05



SOBIKE **SPORTSWEAR** WICKING-**LAYER**

SOBIKE Sportswear's Tech Creation Collection uses the firm's best fabrics, structures. and techniques. The shorts' soft and lightweight elastic woven fabric provides enhanced sweat-wicking and skin-friendly functions. A seamless design, glued construction, laser drilling, and clever ergonomics make for a close and comfortable fit. 9.1





The plastic casing on Zhongshan Spard New Energy's YT30296 lithium-ion battery pack contains an array of quality Samsung 21700 brand cells and a strong and smart battery management system design featuring UART or CANBus communication. On the outside, you'll find a light-up battery level indicator display. It benefits from Underwriters Laboratories (UL) UN38.3 certification. 8.0 /

SHENZHEN TOPBAND BOTTOM BRACKET SENSOR

This high-precision bottom bracket-based sensor promises good linearity and fast dynamic response. It includes integrated step frequency signal acquisition with high-speed sensitivity and can also detect the direction of rotation. Its torque and speed signals work via non-contact induction, which helps offer reliable and stable performance and a long service life. 9.0 / K17

ZHENGZHOU **TECHNOLOGY** DYU C2 **FOLDABLE**





SHENZHEN OMNI INTELLIGENT **TECHNOLOGY**

OC33 HORSESHOE LOCK

This smart horseshoe lock combines a wheel lock and cable and is suitable for regular and electric bicycles. It offers smart 4G LTE-CAT1/CAT M remote network control and obtains vehicle data through CAN BUS/UART communication. Configure high-precision GPS positioning, interact with the background and app through 4G and Bluetooth to control the vehicle remotely, obtain real-time location, and check vehicle status. 8.0 / |

See you in Taichung Sept. 24-27 2024

SHOW DAILY

TAICHUNG bike week 2024



SMART ORANGE FLUID REDUCES VIBRATIONS FOR RIDE

D30 [11.1 / C05] says its antivibration technology is used by about half of the Formula One grid. Now its smart materials to dissipate vibration and absorb shocks are making their way into bike products, starting with handlebar grips.

D3O is already active in the bike business with its impact protection equipment, which incorporates its non-Newtonian fluid. Shown in a tray at the brand's booth, this bright orange "goo" is soft and flexible when kneaded or pulled gently, but it becomes highly resistant when hit or handled abruptly.

At Eurobike yesterday, Daniel Josland, material developer at D3O, showed off the anti-vibration application with two small containers filled with water on a vibration plate - one of them on a D3O foam, the other on EVA.

You can see the D3O foam absorb that vibration," Josland said, cranking up the frequency. "When you compare that to the EVA which is absorbing less vibration, the water is bubbling like crazy.'

D3O has already supplied the material to Odi for anti-vibration handlebar grips. "We managed to prove that it dampens twice as



Daniel Josland shows off D3O's material technology

much vibration compared with the standard grip," said Josland.

The company is using its technology to offer anti-vibration palm padding for gloves, as well as insoles for cycling shoes. The seat and chamois could be next. D3O has also upgraded its impact protection range with its Diablo limb protectors. They are 6.5 millimeters thick, more breathable, about 20% lighter and "way more flexible" than previous options, but still very protective. BS

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